

PR-50 Series

Diaphragm-type High Pressure Regulator



The PR-50 Series pressure regulator is designed to meet the demands for outlet pressures up to 2000 psig while maintaining superior corrosion protection.

For reliability in operation, this precision regulator features a stainless steel body (optional brass) which provides maximum corrosion resistance and safety. The optional self-relieving feature provides an additional level in operational ease, as it allows for trapped downstream pressure to be safely vented to atmosphere through the bonnet.

To prolong regulator life, this unit is supplied with an integral inlet filter which protects the seat against any foreign contamination introduced by the upstream supply.

Features & Specifications

- Gas or liquid service
- Inlet pressure to 6000 psig
- Outlet pressure ranges 0–500, 0–1000, and 0–2000 psig
- 316L stainless steel or brass (alloy 360) construction
- 20 micron inlet filter
- Bubble-tight shutoff
- Diaphragm material standard stainless steel, nylon or PTFE
- Flow coefficients (Cv) of 0.025, 0.06, and 0.20

Applications

- R & D systems
- Cylinder gas regulation
- Sampling systems
- Airline charging carts
- Pilot plants
- Offshore drillings

GO Regulator

PO Box 4866 • Spartanburg, SC 29303-4866
Phone (864) 574-7966 Fax (864) 574-5608
www.goreg.com • sales-go@circor.com

pressure regulators

PR-50 Series

How to Order

PR50 –

BODY MATERIAL

- 1 316L stainless steel
- 2 Brass
- 4 Monel®

PORT CONFIGURATION

- A Standard

For more port configurations, see page 35

PROCESS PORT TYPES (GAUGE PORT TYPES, IF SPECIFIED)

- 1 ¼" FNPT (¼" FNPT gauge ports)
- 2 ¼" tube stub, 2" long (¼" FNTP gauge ports)
- 4 ⅜" FNPT (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)
- K ¼" sch 40 pipe stub, 4" long (¼" FNPT gauge ports)

SURFACE FINISH OF DIAPHRAGM CAVITY

- 1 < 25 Ra, standard

SEAT MATERIAL

- A Tefzel®
- C Polyimide
- H PCTFE (formerly Kel-F® 81)
- I High density PTFE
- Q PEEK™

FLOW COEFFICIENT (Cv)

- 3 0.06
- 5 0.2
- C 0.025

CAP ASSEMBLY

- 1 Standard, aluminum
- 4 Panel mount, aluminum
- 5 Captured vent, aluminum
- 6 Captured vent, panel mount, aluminum
- F Stainless steel
- V Captured vent, stainless steel
- W Panel mount, stainless steel

DIAPHRAGM FACING/BACKING MATERIAL

	Facing	Backing	O-rings	Actuator
1	St. steel	Nylon	Viton®	St. steel
6	Nylon	Nylon	PTFE	St. steel
8	St. steel	Nylon	Viton®	St. steel
0	Nylon	Nylon	PTFE	Monel®
H	—	Nylon	Viton®	St. steel

DIAPHRAGM TYPE

- 1 Non-self-relieving
- 3 Self-relieving

OUTLET RANGE

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

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.gore.com or contact the factory.

Maximum Temperature & Operating Inlet Pressures

Nylon Diaphragm Backing

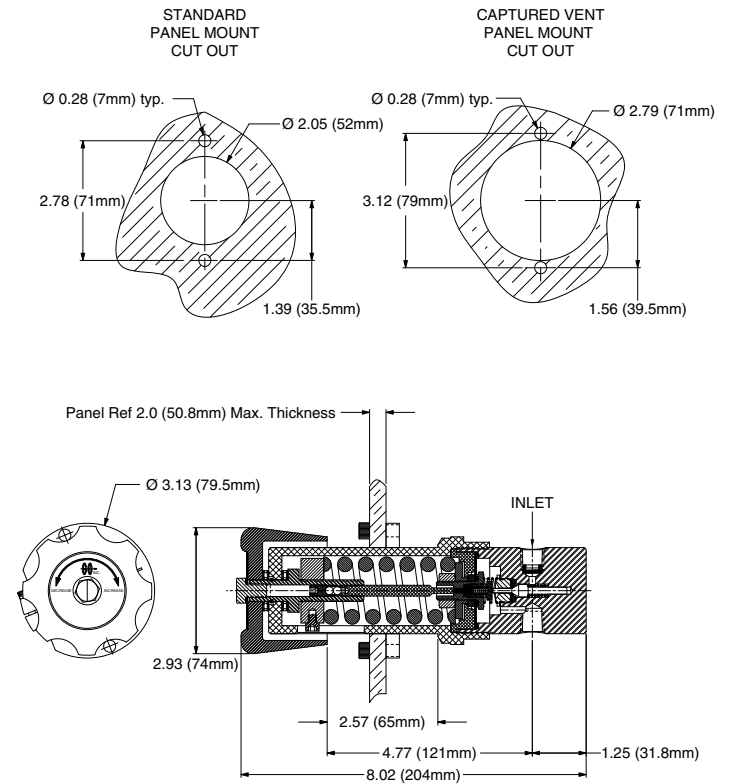
SEAT MATERIAL	MAXIMUM TEMPERATURE*	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	150° F (66° C)	@	3600 psig (24.82 MPa)
High density PTFE	150° F (66° C)	@	3600 psig (24.82 MPa)
PCTFE (formerly Kel-F® 81)	175° F (80° C)	@	6000 psig (41.37 MPa)
Polyimide	175° F (80° C)	@	6000 psig (41.37 MPa)
PEEK™	175° F (80° C)	@	6000 psig (41.37 MPa)

Teflon® Diaphragm Backing

SEAT MATERIAL	MAXIMUM TEMPERATURE*	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	150° F (66° C)	@	3600 psig (24.82 MPa)
High density PTFE	150° F (66° C)	@	3600 psig (24.82 MPa)
PCTFE (formerly Kel-F® 81)	175° F (80° C)	@	6000 psig (41.37 MPa)
Polyimide	350° F (176° C)	@	6000 psig (41.37 MPa)
PEEK™	350° F (176° C)	@	6000 psig (41.37 MPa)

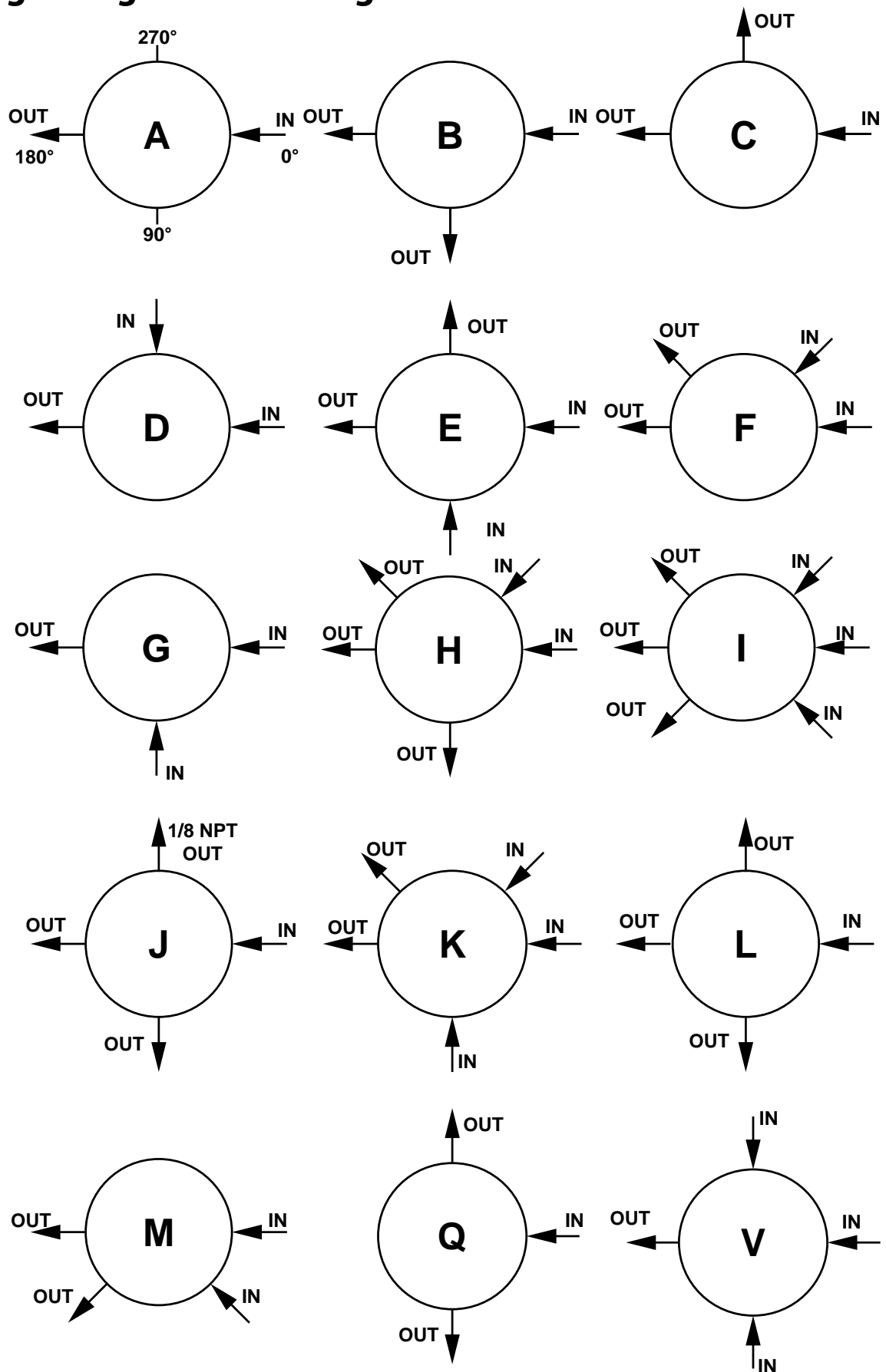
Outline and Mounting Dimensions

Weight = 4.4 lbs (2.0kg)



Monel® is a registered trademark of Special Metals Corporation.
Kel-F® is a registered trademark of 3M Company.
PEEK™ is a trademark of Victrex PLC.
Viton® is a registered trademark of DuPont Dow Elastomers.

Porting Configurations for Single Stage Pressure Regulators



LOCATION OF PORTS FROM
TOP VIEW