

GO REGULATOR, INC.

A division of CIRCOR International, Inc.

PR-1 Series Adjustable Pressure Reducing Regulator



The PR-1 Series is a versatile specialty pressure reducing control regulator designed to fulfill a wide range of needs in instrumentation sample systems and other applications such as semiconductor processing gases. The many features of the PR-1 make it ideal for a wide range of applications controlling pressures at low to moderate flows in gas or liquid service. 316L material is used to facilitate welded connections. Stainless steel caps and adjusting screws prevent atmospheric corrosion and maintain appearance. Enhanced internal body surface finish of better than 25 Ra plus electropolishing allows easier cleaning and potentially less particle contamination in the flow stream.

Five different seat materials, three alternate orifice sizes and seven pressure control ranges with stainless diaphragms offer the user a wide spectrum of capabilities for pressure control with inlet pressures up to 6000 psig and standard operating temperatures up to 500° F (260° C).

Features & Specifications

- Gas or liquid service
- Stainless steel (316L), Inconel, Teflon® and Tefzel® (or optimal main seat material choice) only in flow stream
- Electropolished 316L body with better than 25 Ra diaphragm cavity surface finish
- Stainless steel cap with SS adjusting screw
- Inlet pressures of up to 6000 psi
- Adjustable outlet pressure ranges of 0–10, 0–25, 0–50, 0–100, 0–250, 0–500 and 0–750 psig
- Operating temperatures of -40° F (-40° C) up to +500° F (+260° C)
- 20 micron filters
- Bubble tight shutoff under most conditions
- C_v flow coefficients 0.025, 0.06, 0.20 and 0.50 (0.06 std.)

Options

- Wetted materials of construction: Monel, Hastelloy and Titanium
- Diaphragm attached poppet
- Special fittings
- Diaphragm assist spring for vacuum purging
- Panel mount (1 3/8" mounting hole)
- Relief valves
- Special diaphragm assembly for water service
- SS inlet pressure gauges
- SS outlet pressure gauges
- Base mounting brackets
- Captured vent
- Self-relieving

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PR-1 Series

Adjustable Pressure Reducing Regulator

How to Order

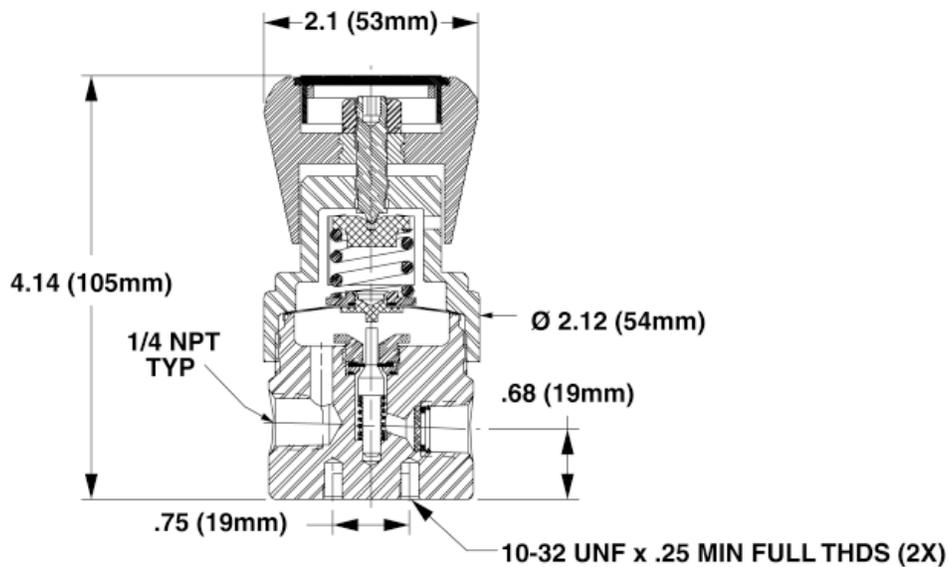
See page 3 for standard configurations. For additional configurations, consult the factory.
See page 4 for port locations.

Maximum Temperature & Operating Inlet Pressures

Seat Material	Maximum Temperature*	@	Maximum Operating Inlet Pressure
Tefzel®	150° F (66°C)	@	3600 psig (24.82 MPa)
High Density Teflon®	150° F (66° C)	@	3600 psig (24.82 MPa)
PCTFE (formerly Kel-F-81)	175° F (80° C)	@	6000 psig (41.37 MPa)
Polyimide	500° F (260 ° C)	@	3600 psig (24.82 MPa)
Polyimide	175° F (80° C)	@	6000 psig (41.37 MPa)
PEEK	500° F (260 ° C)	@	3600 psig (24.82 MPa)
PEEK	175° F (80° C)	@	6000 psig (41.37 MPa)

* Temperatures in excess of 175° F (80° C) require a metal knob or the tamper proof option.
Tefzel® and Teflon® are registered trademarks of Dupont Corporation.

Outline and Mounting Dimensions



Weight - 1.9 lbs (0.86 kg)

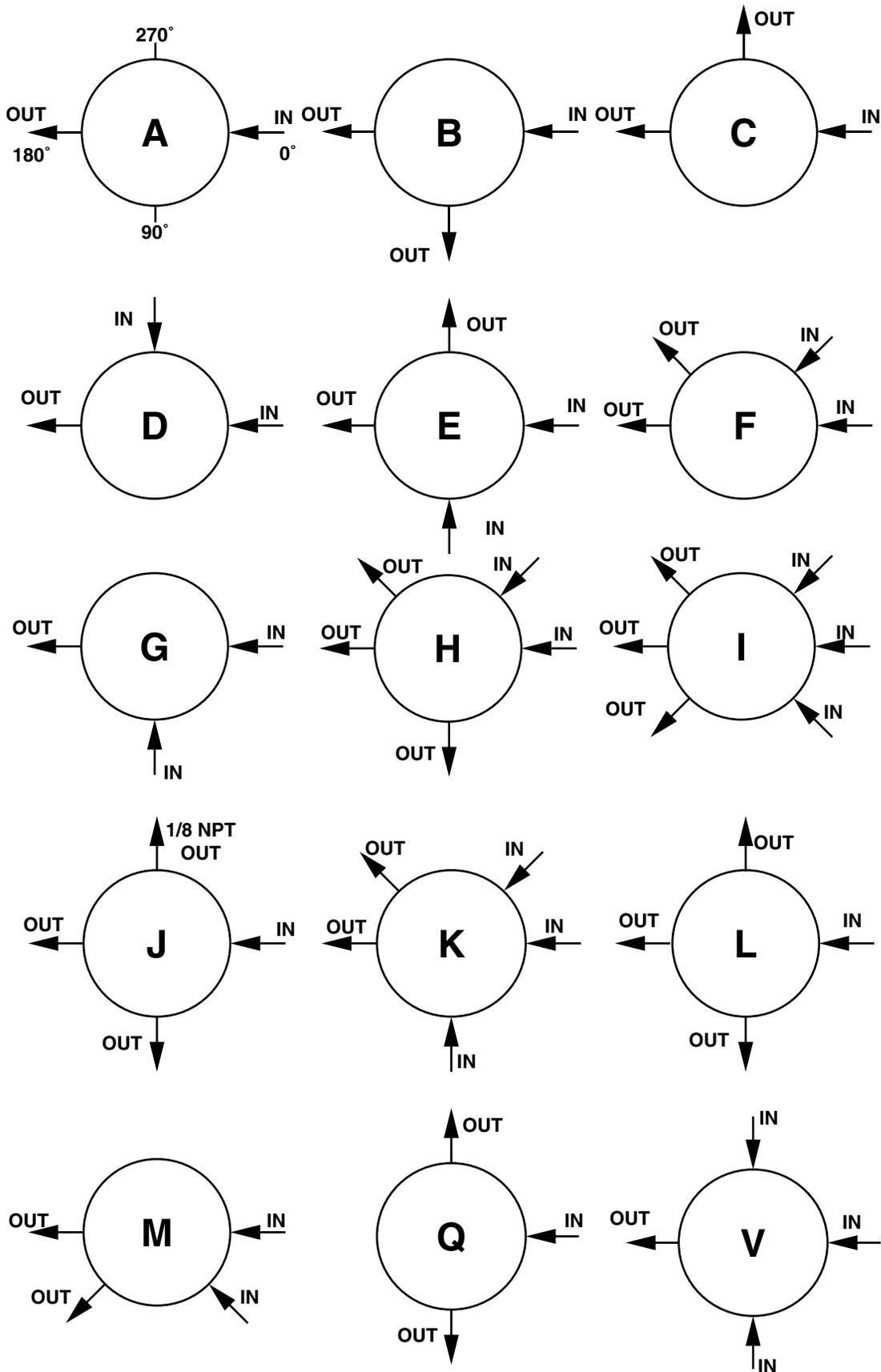
PR-1 Series - Pressure Reducing Regulator

1		SS 316L		Material of Body	
4		Monel			
6		Hastelloy C			
A				Port Configuration (see page 4) STANDARD BODY "A" (ONE INLET PORT AND ONE OUTLET PORT)	
				Process port types (gauge port type, if specified)	
0		1/8" FNPT (1/8" FNPT Gauge Ports)			
1		1/4" FNPT (1/4" FNPT Gauge Ports), Standard			
4		3/8" FNPT (1/4" FNPT Gauge Ports)			
				Surface Finish of Diaphragm Cavity	
1		<25 Ra, Standard			
				Seat Material	
A		Tefzel			
B		CF Teflon			
C		Polyimide, High Temp. Service (Metal Knob Std.)			
H		PCTFE (formerly Kel-F 81)			
I		High Density Teflon			
Q		PEEK			
				Flow Coefficient (Cv)	
Cv					
3		0.06, Standard			
5		0.2			
C		0.025			
H		0.5			
				Outlet Range	
C		0 - 10 Psig			
D		0 - 25 Psig			
E		0 - 50 Psig			
G		0 - 100 Psig			
I		0 - 250 Psig			
J		0 - 500 Psig			
W		0 - 750 Psig			
				Diaphragm Type	
1		Standard Diaphragm			
2		Diaphragm Attached Poppet (DAP)			
3		Self Relieving			
4		Vacuum Assist Spring, Standard Diaphragm			
				Diaphragm Facing / Backing Material	
1		Teflon / S.S.			
6		Tefzel Ring / S.S.			
8		Teflon / Inconel			
0		Teflon / Hastelloy C			
J		Tefzel Ring / Inconel			
				Cap Assembly	
1		Standard, S.S.			
4		Panel Mount, S.S.			
5		Captured Vent, Aluminum			
8		Tamper Proof, S.S.			
H		1/4" NPT Dome Loaded, S.S.			

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Material	Port Config.	Port Style	Cavity Finish	Seat Material	Flow (Cv)	Outlet Range	Diaphragm Type	Diaphragm Material	Cap Assembly
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PORT LOCATIONS (SINGLE STAGE PRESSURE REGULATOR)



LOCATION OF PORTS FROM TOP VIEW