

# Pressure Reducing Regulators

PR1 Series



- ❖ Maximum rated inlet pressure 3500 psig (241 bar)
- ❖ Flow Coefficient  $C_v=0.06$
- ❖ Single stage
- ❖ Metal-to-metal diaphragm seal
- ❖ 316, 316L, Brass, Alloy 276 and Alloy 400 body material

## Pressure Reducing Regulators-PR1

The CIR-LOK PR1 Series is a compact, lightweight high purity single-stage regulator for specialty, flammable and industrial gas.

### Applications

- ❖ Laboratory and point-of-use gas systems
- ❖ Sampling systems, zero, span and calibration analyzer gases
- ❖ Specialty and industrial gas cylinder regulator
- ❖ Chromatograph flame detector fuel supply

### Features

- ❖ Compact
- ❖ Designed to minimize contamination and provide accurate regulation of any corrosive, noncorrosive, or toxic gas
- ❖ Brass model provides added economy for control of non-corrosive media
- ❖ Metal-to-metal diaphragm to body seal ensures minimum inboard and outboard leakage
- ❖ Convoluted diaphragm delivers excellent accuracy and long service life
- ❖ Panel mounting is available

### Operating Parameters

- ❖ Maximum Inlet Pressure  
3500 psig (241 bar)
- ❖ Outlet Pressure Ranges  
0-25 psig (0-1.7 bar), 0-50 psig (0-3.4 bar), 0-100 psig (0-6.9 bar), 0-250 psig (0-17.2 bar), 0-500 psig (0-34.5 bar)
- ❖ Design Proof Pressure  
150% maximum rated
- ❖ Leakage  
Internal: bubble-tight  
External: design to meet  $\leq 2 \times 10^{-8}$  atm cc/sec He
- ❖ Operating Temperature  
PTFE: -40°F to 176°F (-40°C to 80°C)  
PEEK: -40°F to 392°F (-40°C to 200°C)  
PI: -40°F to 500°F (-40°C to 260°C)
- ❖ Flow Capacity  
Cv = 0.06

### Cleaning

- ❖ CGA4.1 and ASTM G93 Grade C

### Internal Volume

- ❖ 6 cc

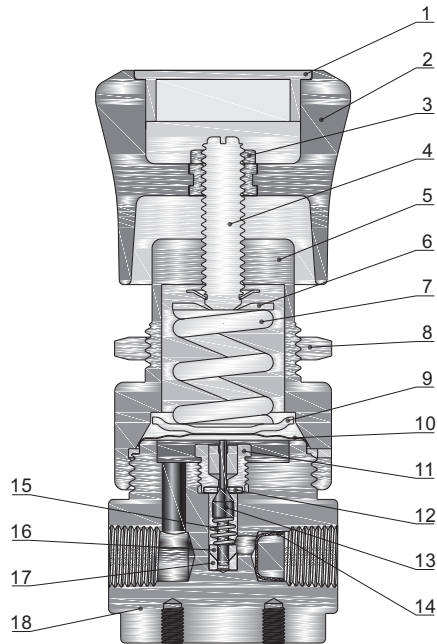
### Weight (without gauges)

- ❖ 2 lbs / 0.9 kg

### Wetted Material

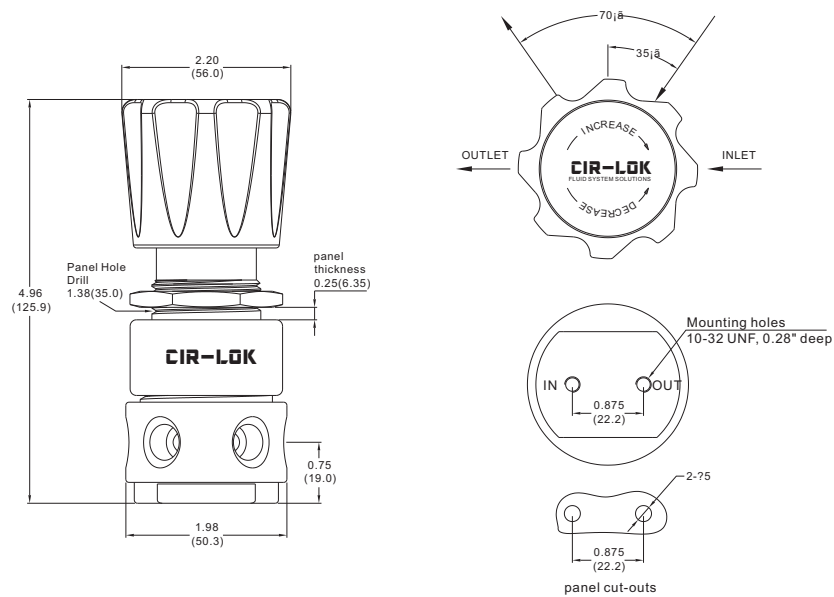
- ❖ Body  
316L S. S., Brass, Alloy276 or Alloy400
- ❖ Bonnet  
300 series S. S., Brass
- ❖ Diaphragm  
316 S. S., Elgiloy®
- ❖ Seat  
PEEK, PCTFE, PI
- ❖ Remaining Parts  
316 S. S., Brass, Alloy276 or Alloy400

## Standard Materials of Construction



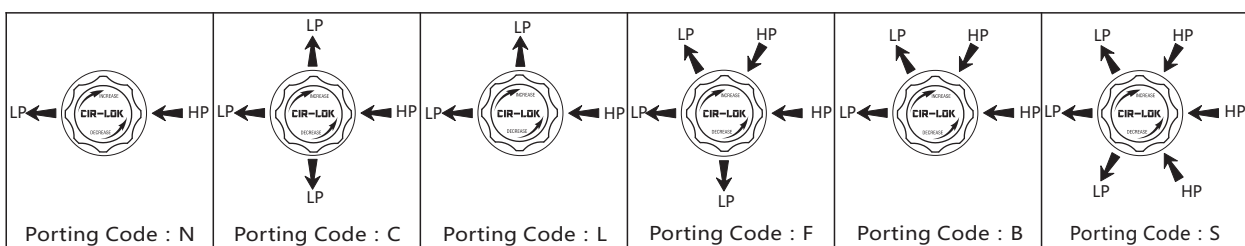
Item	Component	Material Grade/ASTM Specification
		316 S.S.
1	Cover	ABS
2	Knob handle	ABS
3	Stem nut	316 S.S.
4	Stem	316 S.S.
5	Bonnet	316 S.S./A479
6	Spring button	316 S.S./A276
7	Range spring	316 SS
8	Mounting nut	316 S.S./A276
9	stop plate	316 S.S./A276
10	Diaphragm	Alloy X-750 or alloy C-276
11	Seat retainer	316 S.S./A276
12	Seat	PCTFE or PEEK or PI
13	Poppet	316 S.S./A276
14	Filter	316 S.S.
15	Poppet spring	Alloy X-750
16	Poppte damper	PTFE/D1710
17	Friction sleeve	316 S.S./A276
18	Body	316 S.S./A479

## Dimensions

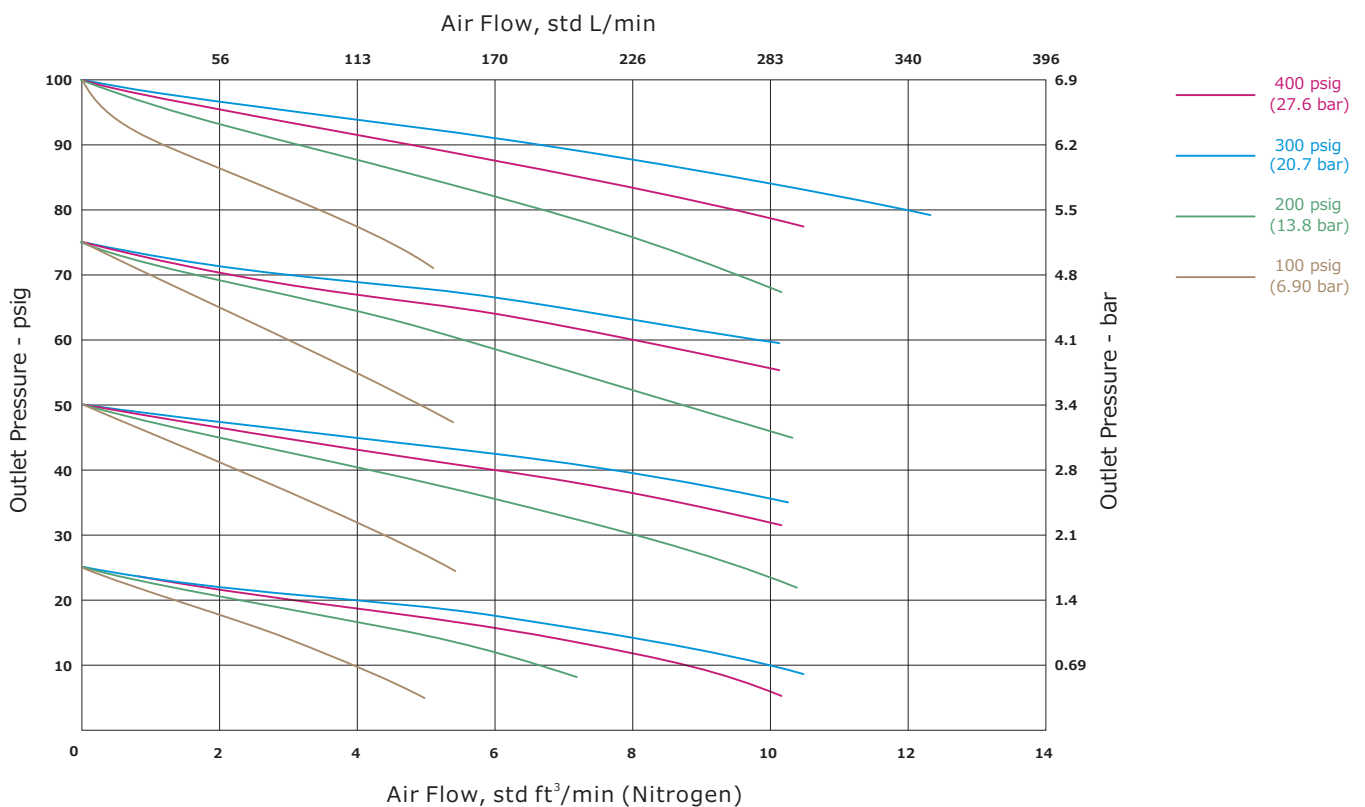
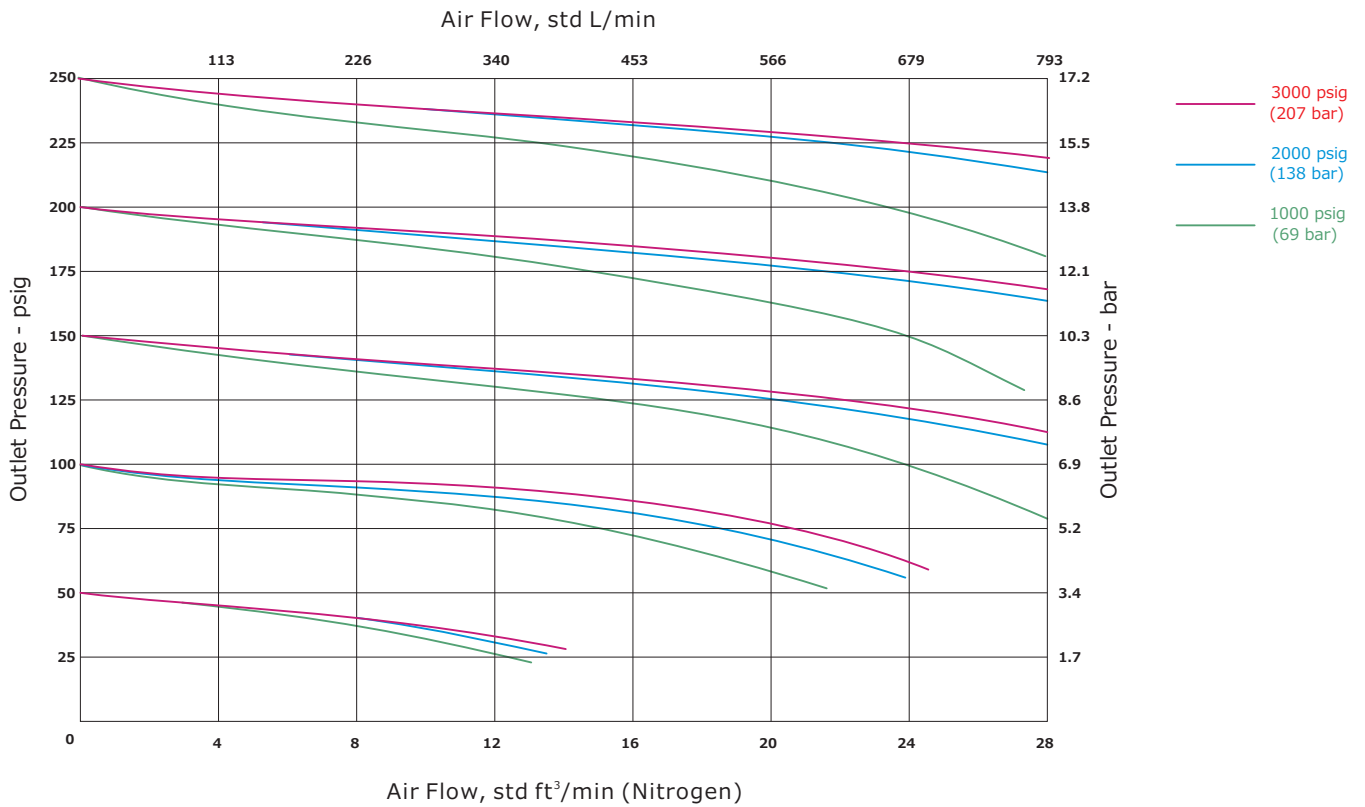


## Port Configurations

Notes: HP=High Pressure; LP=Low Pressure



## Flow Charts



## How to Order

**PR1 — FNPT4 — IB — 3500G — 316L**

Series	Inlet Type Outlet Type	Inlet Size Outlet Size	Seat Material	Porting	Intel Pressure	Out Pressure	Gauges	Body Material
<b>PR1</b>	<b>FNPT</b> Female NPT	<b>2</b> 1/8 in.	PCTFE	<b>N</b> No Gauge Ports	<b>3</b> 3500 psig	<b>500</b> 0-500 psig	<b>G</b> No gauges with gauges	<b>316</b> 316 S.S.
	<b>NPT</b> Male NPT	<b>4</b> 1/4 in.	<b>P</b> PEEK	<b>L</b> One Gauge Ports		<b>250</b> 0-250 psig		<b>316L</b> 316L S.S.
	<b>FBT</b> Female BSPT	<b>6</b> 6 mm	<b>I</b> PI	<b>C</b> One Gauge Ports		<b>100</b> 0-100 psig		<b>A400</b> Alloy 400
	<b>MBT</b> Male BSPT	<b>8</b> 8 mm		<b>B</b> Two Gauge Ports		<b>50</b> 0-50 psig		<b>A276</b> Alloy C276
	<b>F</b> Fractional Tube Fitting			<b>F</b> Two Gauge Ports		<b>25</b> 0-25 psig		<b>BR</b> Brass
	<b>M</b> Metric Tube Fitting			<b>S</b> Two Gauge Ports				