

# GO REGULATOR, INC.

## Cylinder Regulators

### Index

|                        |                    |
|------------------------|--------------------|
| Safety Warning         | Inside Front Cover |
| CC2 Series             | 1                  |
| CYL-1 Series           | 3                  |
| CYL-2 Series           | 5                  |
| CYL-3 Series           | 7                  |
| CYL-20 Series          | 9                  |
| CYL-21 Series          | 11                 |
| COM-1 Series           | 13                 |
| COM-2B Series          | 15                 |
| COM-2P Series          | 17                 |
| Porting Configurations | 19                 |
| Disclaimers            | Inside Back Cover  |



pressure regulators



## **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. When selecting products, the total system design must be considered to ensure safe, trouble-free performance. 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.

Contact your authorized GO Regulator sales and service representative for information about additional sizes and special alloys.

## **SAFETY WARNING:**

---

GO Regulator products are designed for installation only by professional suitably qualified licensed system installers experienced in the applications and environments for which the products are intended. These products are intended for integration into a system. Where these products are to be used with flammable or hazardous media, precautions must be taken by the system designer and installer to ensure the safety of persons and property. Flammable or hazardous media pose risks associated with fire or explosion, as well as burning, poisoning or other injury or death to persons and/or destruction of property. The system designer and installer must provide for the capture and control of such substances from any vents in the product(s). The system installer must not permit any leakage or uncontrolled escape of hazardous or flammable substances. The system operator must be trained to follow appropriate precautions and must inspect and maintain the system and its components including the product(s) and at regular intervals in accordance with timescales recommended by the supplier to prevent unacceptable wear or failure.

## CC2 Series

Compact Two-stage Cylinder Pressure Regulator



The CC2 Series compact two-stage precision pressure regulator is well suited for instrumentation applications requiring a precise and stable delivery pressure. This regulator was originally designed to meet the needs of the instrumentation industry; however, it would also be very useful in many other applications that require a compact two-stage pressure regulator to supply a precise delivery pressure with fluctuating supply pressures.

Another benefit of using the CC2 Series is that internally, it shares some of its design features and options with the time proven CPR-1 Series pressure regulator. These features and options allow the customer to essentially tailor this regulator to accommodate virtually any application requiring low to moderate flow rates. The unit will also be offered with inlet/outlet pressure gauges, CGA connections and relief valves.

The CC2 Series regulator is manufactured in 316L stainless steel as a standard option. Please consult GO Regulator for any optional materials of construction that might be required for toxic or corrosive process gas applications.

### Features & Specifications

- Compact size
- Two-stage regulation
- Stainless steel diaphragm
- Gas or liquid service
- Low internal volumes
- Maximum inlet pressure up to 3600 psig
- Outlet pressure ranges: 0–10 psig, 0–25 psig, 0–50 psig, 0–100 psig, 0–250 psig and 0–500 psig
- Cv flow coefficients: 0.06, 0.025, 0.2
- Leak rate, bubble-tight
- Operating temperatures: –40° F to +175° F (–40° C to +80° C)
- Inlet/outlet connections: 1/8" FNPT

pressure regulators

# CC2 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**CC - 3 F O C 1 1 1 1** CGA Fitting **0 0 0** **1 A 3 A 3 A**

### BODY MATERIAL

- 1** 316L stainless steel
- 2 Brass
- 3 Aluminum

### PORT CONFIGURATIONS

- F** Standard
- For more port configurations, see page 19.

### PROCESS PORT TYPES

(GAUGE PORT TYPE, IF NECESSARY)

- 0** 1/8" FNPT (1/8" FNPT gauge ports)

### OUTPUT 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

### DIAPHRAGM TYPE, 1<sup>ST</sup> STAGE

- 1** Standard

### DIAPHRAGM TYPE, 2<sup>ND</sup> STAGE

- 1** Standard

### CAP ASSEMBLY, 1<sup>ST</sup> STAGE

- 1** Tamper-proof, aluminum
- 4 Tamper-proof, panel mount, aluminum
- 5 Tamper-proof, captured vent, aluminum

### OPTIONS

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

### 2<sup>ND</sup> STAGE Cv FLOW

- 3** 0.06
- 5** 0.2
- C** 0.025

### 2<sup>ND</sup> STAGE SEAT MATERIAL

- A** Tefzel®
- B** Ceramic Filled PTFE
- H** PCTFE
- Q** PEEK™

### 1<sup>ST</sup> STAGE Cv FLOW

- 3** 0.06
- 5** 0.2
- C** 0.025

### 1<sup>ST</sup> STAGE SEAT MATERIAL

- A** Tefzel®
- B** Ceramic Filled PTFE
- H** PCTFE
- Q** PEEK™

### GAUGES

- 1** Include gauges
- 2** Omit gauges
- 3** Customer-supplied, to be factory installed

### CGA FITTING

Use '000' to omit CGA  
 Use 'CUS' for customer-supplied CGA, to be factory installed

### CAP ASSEMBLY, 2<sup>ND</sup> STAGE

- 1** Standard, aluminum
- 4 Panel mount, aluminum
- 5 Captured vent, aluminum
- 7 Captured vent, stainless steel
- 8 Tamper-proof, aluminum
- 9 Fine adjust, 1/2" panel mount, aluminum
- 0 Fine adjust, 1 3/8" panel mount, aluminum
- D** Captured vent, tamper-proof, stainless steel

## Maximum Temperature & Operating Inlet Pressures

| SEAT MATERIAL       | MAXIMUM TEMPERATURE |   | MAXIMUM OPERATING INLET PRESSURE |
|---------------------|---------------------|---|----------------------------------|
| Tefzel®             | 150° F (66° C)      | @ | 3600 psig (24.82 MPa)            |
| Ceramic Filled PTFE | 175° F (80° C)      | @ | 3600 psig (24.82 MPa)            |
| PEEK™               | 175° F (80° C)      | @ | 3600 psig (24.82 MPa)            |
| PCTFE               | 175° F (80° C)      | @ | 3600 psig (24.82 MPa)            |

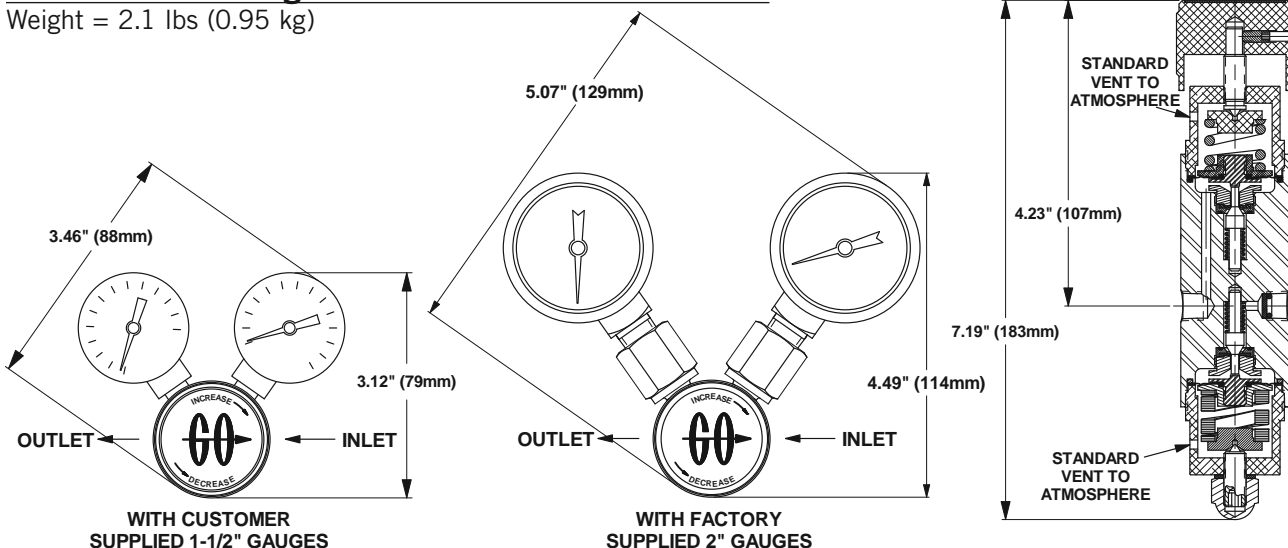
NOTE: Contact the factory for any additional requirements.

Tefzel® is a registered trademark of the DuPont Company.

PEEK™ is a trademark of Victrex PLC.

## Outline & Mounting Dimensions

Weight = 2.1 lbs (0.95 kg)



## CYL-1 Series

Single Stage Brass Cylinder; Gas Pressure Reducing Regulator



*(Shown with optional outlet valve)*

The CYL-1 Series is designed as a complete compact pressure control module. The basis of this unit is the economical PR-2 Series pressure control valve which is widely used in instrumentation sample systems as well as many other applications requiring maximum reliability. This regulator, when ordered with appropriate gauges and CGA inlet fitting, is designed for use as a compressed gas cylinder regulator for those applications where the corrosion resistance of stainless steel is not a requirement.

### Features & Specifications

- CGA inlet fitting
- Integral inlet filter
- 2" diameter brass gauges
- PTFE-lined stainless steel diaphragm
- Maximum inlet pressure: 3600 psig
- Outlet pressure ranges: 0–10 psig, 0–25 psig, 0–50 psig, 0–100 psig, 0–250, 0–500 and 0–750 psig
- Fluid media; non-corrosive gases
- Operating temperatures: –40° F to +175° F (–40° C to +80° C)
- Cv flow coefficients: 0.025, 0.06, 0.20 and 0.5

pressure regulators

# CYL-1 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**C1 - 2 F 1 1 A 3 C 1** *CGA Fitting* **0 0 0** **1 A**

**BODY MATERIAL**  
**2 Brass**

**PORT CONFIGURATION**  
**F Standard**  
 For more port configurations, see page 20.

**PROCESS PORT TYPES (GAUGE PORT TYPES, IF SPECIFIED)**  
**1 1/4" FNPT (1/4" FNPT gauge ports)**  
**4 3/8" FNPT (1/4" FNPT gauge ports)**

**DIAPHRAGM TYPE**  
**1 Standard diaphragm**  
**3 Self-relieving**  
**8 Tefzel® ring/stainless steel**

**SEAT MATERIAL**  
**A Tefzel®**  
**B Ceramic Filled PTFE**  
**H PCTFE**  
**Q PEEK™**

**OPTIONS**  
**A EB33 (oxygen cleaning)**  
**B EB5 cleaning**  
**D Helium leak test**  
**E Pressure test certificate**  
**F Certificate of Conformity**  
**G CMTR**

**GAUGES**  
**1 Include gauges**  
**2 Omit gauges**  
**3 Customer-supplied, to be factory installed**

**CGA FITTING**  
 Use '000' to omit CGA  
 Use 'CUS' for customer-supplied CGA, to be factory installed

**CAP ASSEMBLY**  
**1 Standard, stainless steel**  
**4 Panel mount, stainless steel**  
**7 Captured vent, stainless steel**  
**8 Tamper proof, stainless steel**

**OUTPUT 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**

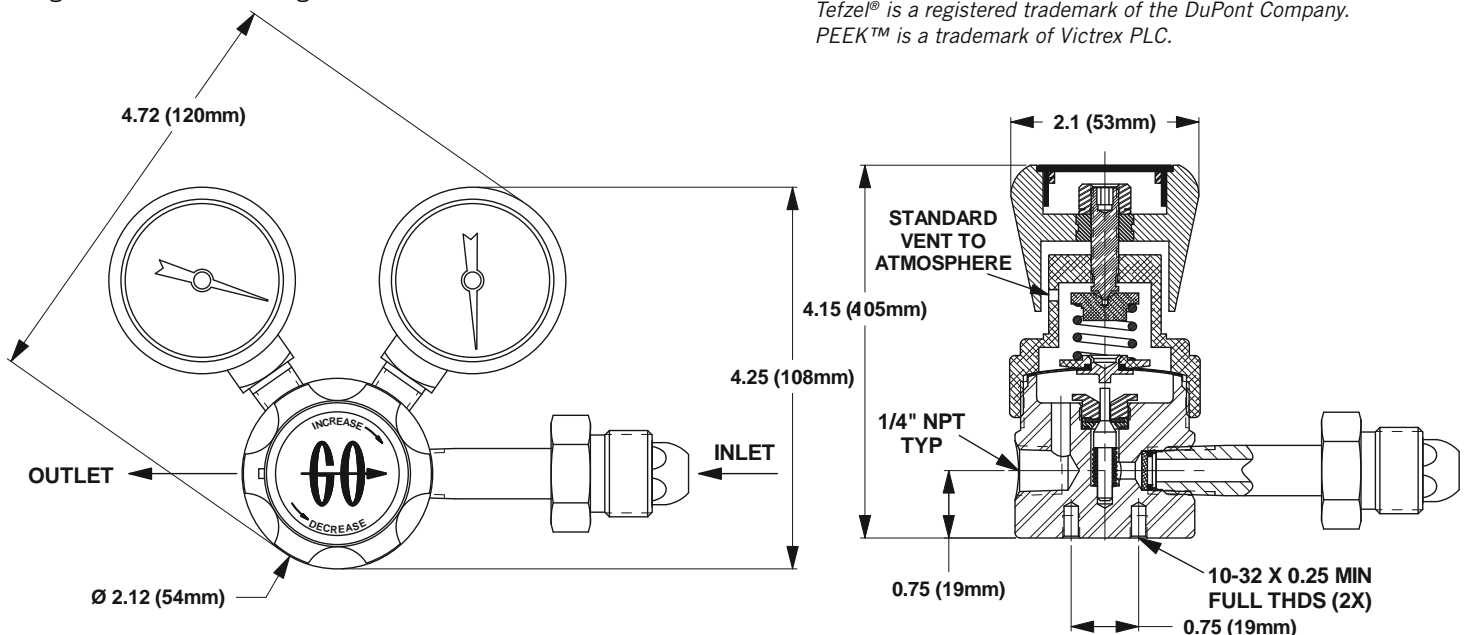
**FLOW COEFFICIENT (Cv)**  
**3 0.06**  
**5 0.2**  
**C 0.025**  
**H 0.5**

## Maximum Temperature & Operating Inlet Pressures

| SEAT MATERIAL       | MAXIMUM TEMPERATURE | MAXIMUM OPERATING INLET PRESSURE |
|---------------------|---------------------|----------------------------------|
| Tefzel®             | 150° F (66° C)      | @ 3600 psig (24.82 MPa)          |
| PCTFE               | 175° F (80° C)      | @ 3600 psig (24.82 MPa)          |
| PEEK™               | 175° F (80° C)      | @ 3600 psig (24.82 MPa)          |
| Ceramic Filled PTFE | 175° F (80° C)      | @ 3600 psig (24.82 MPa)          |

## Outline & Mounting Dimensions

Weight = 1.9 lbs (0.86 kg)



## CYL-2 Series

Two-stage Brass Cylinder Gas Pressure Reducing Regulator



The CYL-2 Series is a precision two-stage regulator well suited for instrumentation applications requiring a precise and stable pressure source. This pressure regulator was developed to meet the needs of the instrumentation industry, but is also well suited for other applications requiring precision pressure supply.

The development of this series provides the maximum flexibility that is available in any cylinder regulator.

### Features & Specifications

- Brass construction
- 1<sup>st</sup> stage integral 20 micron filter and 2<sup>nd</sup> stage integral 40 micron filter
- PTFE-lined stainless steel diaphragm in both stages
- Tefzel® seats are standard
- 2" diameter brass gauges
- CGA inlet fitting
- Stainless steel caps
- Optional relief valves and shut off valves
- Maximum inlet pressure: 3600 psig
- Outlet pressure ranges 0–10 psig, 0–25 psig, 0–50 psig, 0–100 psig, 0–250 psig and 0–500 psig
- Fluid media; non-corrosive gases
- Cv flow coefficients: 0.06, 0.025, 0.20, 0.50
- Operating temperatures: –40° F to +175° F (–40° C to +80° C)
- ¼" FNPT inlet/outlet connections standard

pressure regulators

# CYL-2 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**C2-2 F 1 C 1 1 1 1** CGA Fitting **0 0 0** **1 A 3 A 3 A**

**BODY MATERIAL**

- 2** Brass
- 8 Chrome-plated brass

**PORT CONFIGURATION**

- F** Standard

For more port configurations, see page 19.

**PROCESS PORT TYPES (GAUGE PORT TYPE, IF SPECIFIED)**

- 1** 1/4" FNPT (1/4" FNPT gauge ports)
- 4 3/8" FNPT (1/4" FNPT gauge ports)

**OUTPUT 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

**DIAPHRAGM TYPE, 1<sup>ST</sup> STAGE**

- 1** Standard diaphragm
- 8 Tefzel® ring/stainless steel
- 7 Liquid service

**DIAPHRAGM TYPE, 2<sup>ND</sup> STAGE**

- 1** Standard diaphragm
- 3 Self-relieving
- 8 Tefzel® ring/stainless steel
- 7 Liquid service

**CAP ASSEMBLY, 1<sup>ST</sup> STAGE**

- 1** Tamper proof, standard, stainless steel
- 4 Tamper proof, panel mount, stainless steel
- 7 Tamper proof, captured vent, stainless steel

**OPTIONS**

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

**2<sup>ND</sup> STAGE Cv FLOW**

- 3** **0.06**
- 5** 0.2
- C** 0.025
- H** 0.5

**2<sup>ND</sup> STAGE SEAT MATERIAL**

- A** Tefzel®
- B** Ceramic Filled PTFE
- H** PCTFE
- Q** PEEK™, low temperature service, plastic knob

**1<sup>ST</sup> STAGE Cv FLOW**

- 3** **0.06**
- 5** 0.2
- C** 0.025
- H** 0.5

**1<sup>ST</sup> STAGE SEAT MATERIAL**

- A** Tefzel®
- B** Ceramic Filled PTFE
- H** PCTFE
- Q** PEEK™

**GAUGES**

- 1** Include gauges
- 2** Omit gauges
- 3** Customer-supplied, to be factory installed

**CGA FITTINGS**

- Use '000' to omit CGA
- Use 'CUS' for customer-supplied CGA, to be factory installed

**CAP ASSEMBLY, 2<sup>ND</sup> STAGE**

- 1** **Standard, stainless steel**
- 4** Panel mount, stainless steel
- 7** Captured vent, stainless steel
- 8** Tamper proof, stainless steel

## Maximum Temperature & Operating Inlet Pressures

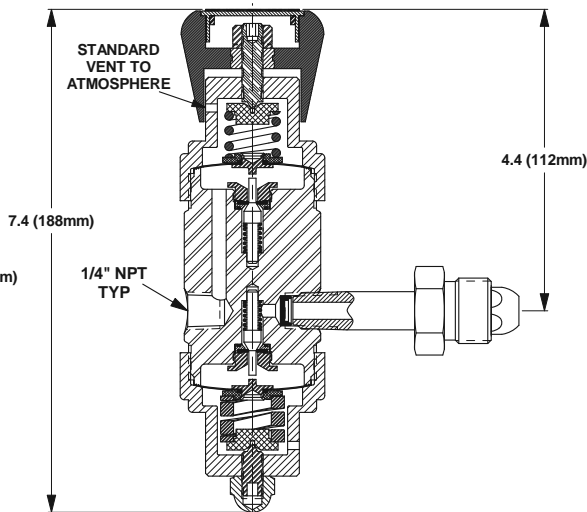
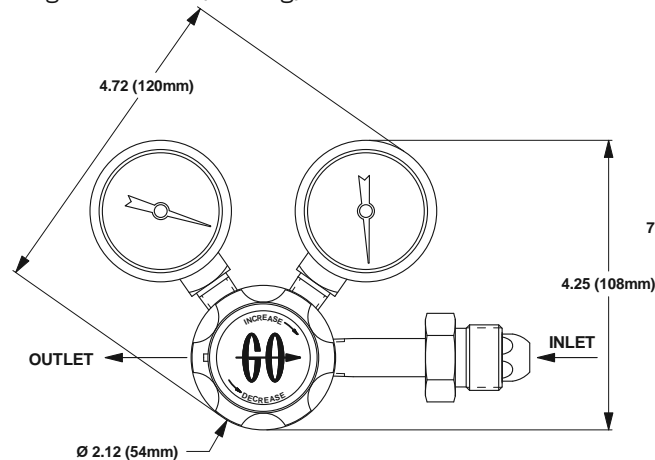
| SEAT MATERIAL       | MAXIMUM TEMPERATURE | MAXIMUM OPERATING INLET PRESSURE |
|---------------------|---------------------|----------------------------------|
| Tefzel®             | 150° F (66° C)      | @ 3600 psig (24.82 MPa)          |
| PCTFE               | 175° F (80° C)      | @ 3600 psig (24.82 MPa)          |
| PEEK™               | 175° F (80° C)      | @ 3600 psig (24.82 MPa)          |
| Ceramic Filled PTFE | 175° F (80° C)      | @ 3600 psig (24.82 MPa)          |

Tefzel® is a registered trademark of the DuPont Company.  
 PEEK™ is a trademark of Victrex PLC.

**NOTE:** Contact the factory for any additional requirements.

## Outline & Mounting Dimensions

Weight = 3.5 lbs (1.59 kg)





## CYL-3 Series

High Pressure Economy Brass Cylinder Regulator



*(Shown with optional outlet valve)*

The CYL-3 Series is an economical brass high pressure regulator, designed to accept inlet pressures up to 3600 psig and deliver outlet pressures from 0–100 psig up to 0–2000 psig. This single-stage brass regulator is perfectly suited for cylinder usage with non-corrosive gases. Good regulation characteristics are provided by a carefully engineered piston sensor. Ease of outlet pressure adjustment is provided by the T-handle, which is offered as standard.

### Features & Specifications

- Inlet pressures up to 3600 psig
- Control pressures from 0–100 psig up to 0–2000 psig
- Brass (alloy 360) construction
- Stainless steel poppet
- 20 micron inlet filter
- Bubble-tight shutoff
- CGA connection with integral inlet filter
- 2" diameter brass gauges
- Cv flow coefficients: 0.06 (standard), 0.2 (optional)
- Better than 25 Ra finish in diaphragm cavity
- Optional relief valves and outlet shutoff valves

pressure regulators

# CYL-3 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**C3 - 2 F 1 G 1 3 A 1** *CGA Fitting* **0 0 0 1 A**

**BODY MATERIAL**

**2 Brass**

**PORT CONFIGURATION**

**F Standard**

For more port configurations, see page 20.

**PROCESS PORT TYPES**

**(GAUGE PORT TYPE, IF SPECIFIED)**

**1 1/4" FNPT (1/4" FNPT gauge ports)**

**OUTPUT RANGE**

**G 0-100 psig**

**I 0-250 psig**

**J 0-500 psig**

**K 0-1000 psig**

**L 0-2000 psig**

**PISTON TYPE**

**1 Non-self-relieving**

**3 Self-relieving**

**OPTIONS**

**A** EB33 (oxygen cleaning)

**B** EB5 cleaning

**D** Helium leak test

**E** Pressure test certificate

**F** Certificate of Conformity

**G** CMTR

**GAUGES**

**1** Include gauges

**2** Omit gauges

**3** Customer-supplied, to be factory installed

**CGA FITTINGS**

Use '000' to omit CGA

Use 'CUS' for customer-supplied CGA, to be factory installed

**CAP ASSEMBLY**

**1 Standard**

**4** Panel mount

**8** Tamper-proof

**A** Low torque

**Y** Hand knob

**SEAT MATERIAL**

**A Tefzel®**

**I** PTFE

**FLOW COEFFICIENT (Cv)**

**3 0.06**

**5 0.2**

## Maximum Temperature & Operating Inlet Pressures

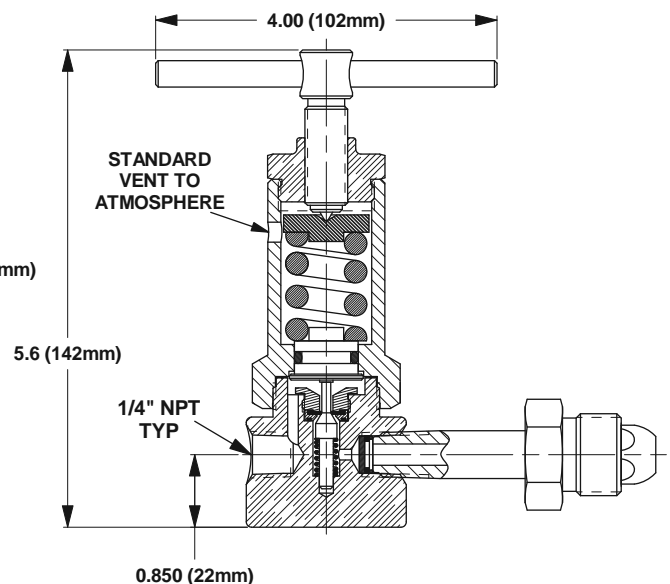
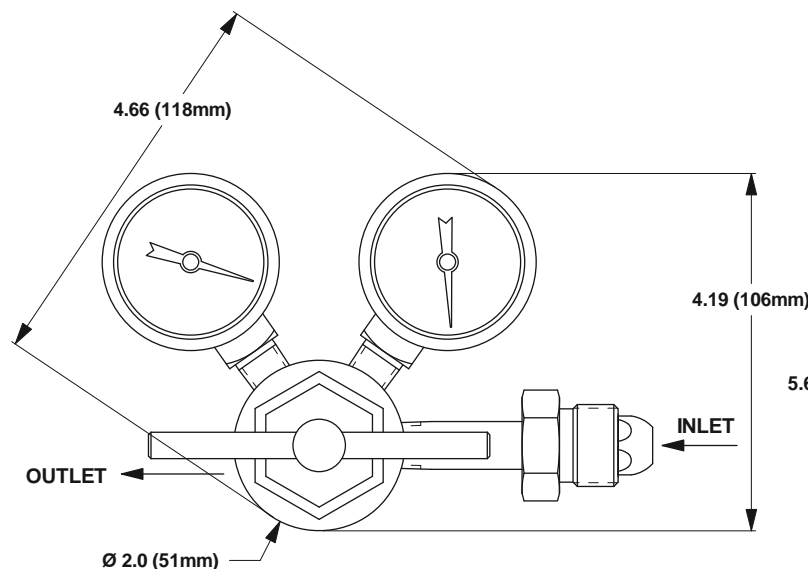
| SEAT MATERIAL     | MAXIMUM TEMPERATURE | MAXIMUM OPERATING INLET PRESSURE |
|-------------------|---------------------|----------------------------------|
| Tefzel®           | 150° F (66° C)      | @ 3600 psig (24.82 MPa)          |
| High density PTFE | 150° F (66° C)      | @ 3600 psig (24.82 MPa)          |

NOTE: Contact the factory for any additional requirements.

Tefzel® is a registered trademark of the DuPont Company.

## Outline & Mounting Dimensions

Weight = 2.74 lbs (1.22 kg)



## CYL-20 Series

Corrosion-resistant Two-stage Pressure Reducing Regulator



Precision pressure control is now possible with the CYL-20 Series regulator. This two-stage regulator, constructed of 316L stainless steel and PTFE, has less than 0.01 percent outlet pressure change with varying inlet pressures and is designed for use in gas calibration systems and semiconductor materials processing.

With materials of only 316L stainless steel, PTFE and Tefzel®, this regulator is suitable for service in corrosive streams as well as non-corrosive streams with potential surface absorption problems. This regulator accepts inlet pressures up to 6000 psig and has bubble-tight shutoff. Operating temperature ranges may vary from -40° C up to +260° C and outlet pressure ranges of 0-10 psig up to 0-500 psig are easily adjustable by a fluted knob.

### Features & Specifications

- 316L stainless steel, INCONEL®, PTFE & Tefzel® in contact with operating media only
- Stainless steel caps & adjusting screws
- Bubble-tight shutoff
- CGA fitting for cylinder connection
- 2" diameter 316 stainless steel gauges
- Maximum inlet pressure: 6000 psig
- Outlet pressure ranges of 0-10 psig, 0-25 psig, 0-50 psig, 0-100 psig, 0-250 psig and 0-500 psig
- PTFE lined INCONEL® diaphragm standard
- Cv flow coefficients: 0.025, 0.06, 0.20, 0.50
- Operating temperatures of one line: -40° F to +500° F (-40° C to +260° C)
- Outlet pressure change is 0.01 psig per 100 psig of inlet decay

### Options

- Captured vent
- Shutoff valve
- 3/8" FNPT

pressure regulators

# CYL-20 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**C2 - 1 F 1 C 1 1 1 1 1** CGA Fitting **0 0 0** **1 A 3 A 3 A**

### BODY MATERIAL

- 1** 316L stainless steel, stainless steel diaphragm
- C** 316L stainless steel, INCONEL® diaphragm

### PORT CONFIGURATION

- F** Standard
- For more port configurations, see page 19.

### PROCESS PORT TYPES

(GAUGE PORT TYPE, IF SPECIFIED)

- 1** 1/4" FNPT (1/4" gauge ports)
- 4** 3/8" FNPT (1/4" gauge ports)

### OUTPUT 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

### DIAPHRAGM TYPE, 1<sup>ST</sup> STAGE

- 1** Standard diaphragm
- 8** Tefzel® ring/metal backing
- 7** Liquid service

### DIAPHRAGM TYPE, 2<sup>ND</sup> STAGE

- 1** Standard diaphragm
- 3** Self-relieving
- 8** Tefzel® ring/metal backing
- 7** Liquid service

### OPTIONS

- A** EB33 (oxygen cleaning)
  - B** EB5 cleaning
  - D** Helium leak test
  - E** Pressure test certificate
  - F** Certificate of Conformity
  - G** CMTR
- 2<sup>ND</sup> STAGE Cv FLOW**
- 3** 0.06
  - 5** 0.2
  - C** 0.025
  - H** 0.5
- 2<sup>ND</sup> STAGE SEAT MATERIAL**
- A** Tefzel®
  - B** Ceramic Filled PTFE
  - H** PCTFE
  - P** PEEK™, high temperature service (metal knob, standard)
  - Q** PEEK™, low temperature service, plastic knob

### 1<sup>ST</sup> STAGE Cv FLOW

- 3** 0.06
- 5** 0.2
- C** 0.025
- H** 0.5

### 1<sup>ST</sup> STAGE SEAT MATERIAL

- A** Tefzel®
- B** Ceramic Filled PTFE
- H** PCTFE
- Q** PEEK™

### GAUGES

- 1** Include gauges
- 2** Omit gauges
- 3** Customer-supplied, to be factory installed

### CGA FITTINGS

Use '000' to omit CGA  
 Use 'CUS' for customer-supplied CGA, to be factory installed

### CAP ASSEMBLY, 2<sup>ND</sup> STAGE

- 1** Standard
- 4** Panel mount
- 7** Captured vent, stainless steel
- 8** Tamper proof
- J** Captured vent, panel mount, stainless steel

### CAP ASSEMBLY, 1<sup>ST</sup> STAGE

- 1** Tamper-proof
- 4** Tamper proof, panel mount
- 7** Tamper proof, captured vent, stainless steel
- J** Tamper proof, captured vent, panel mount, stainless steel

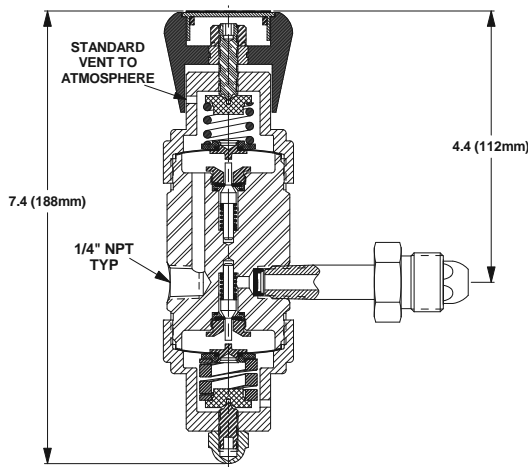
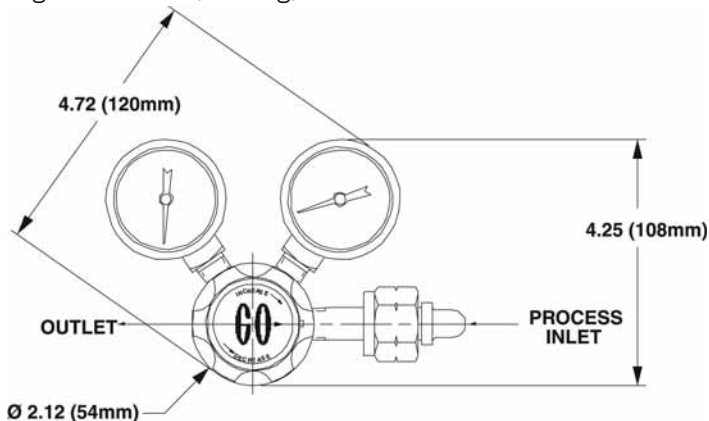
NOTE: Contact the factory for any additional requirements.

## Maximum Temperature & Operating Inlet Pressures

| SEAT MATERIAL       | MAXIMUM TEMPERATURE | MAXIMUM OPERATING INLET PRESSURE |
|---------------------|---------------------|----------------------------------|
| Tefzel®             | 150° F (66° C)      | @ 3600 psig (24.82 MPa)          |
| PCTFE               | 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)          |
| Ceramic Filled PTFE | 175° F (80° C)      | @ 3600 psig (24.82 MPa)          |

## Outline & Mounting Dimensions

Weight = 3.9 lbs (1.77 kg)



Tefzel® is a registered trademark of the DuPont Company.  
 INCONEL® is a registered trademark of Special Metals Corporation.  
 PEEK™ is a trademark of Victrex PLC.

## CYL-21 Series

Corrosion-resistant Single Stage Cylinder Regulator



(Shown with optional outlet valve)

The CYL-21 Series is a compact cylinder regulator based on the time proven design of the PR-1 Series single-stage stainless steel line regulator and is suitable for most corrosive gas cylinder applications. While normally used for low and moderate flow service, optional high flow orifices are available.

The standard unit is equipped with CGA connector, integral inlet filter, inlet and outlet pressure gauges and may be ordered with extra inlet or outlet ports for inlet purging, outlet relief valves or other accessory items. When used in service with toxic or explosive gases, we recommend the installation of a captured vent option. This option is a true captured vent cap and not merely a standard cap with a vent port. It comes complete with a CGA fitting and 2" diameter gauges.

### Features & Specifications

- 316L stainless steel construction (standard), MONEL® optional
- Inlet pressures up to 6000 psig
- 20 micron inlet filter
- Bubble-tight shutoff
- CGA inlet fitting
- 2" diameter 316 stainless steel gauges
- Outlet pressure ranges 0-10 psig, 0-25 psig, 0-50 psig, 0-100 psig, 0-250 psig, 0-500 psig, and 0-750 psig
- Optional Cv flow coefficients: 0.025, 0.06, 0.20, 0.50

pressure regulators

# CYL-21 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**C1 - 1 F 1 1 A 3 C 1** CGA Fitting **0 0 0 1 A**

### BODY MATERIAL

- 1** 316L stainless steel, stainless steel diaphragm
- 4** MONEL®, INCONEL® diaphragm
- C** **316L stainless steel, INCONEL® diaphragm**

### PORT CONFIGURATION

- F** **Standard**
- For more port configurations, see page 20.

### PROCESS PORT TYPES

(GAUGE PORT TYPE, IF SPECIFIED)

- 1** 1/4" FNPT (1/4" FNPT gauge ports)
- 4** 3/8" FNPT (1/4" FNPT gauge ports)

### DIAPHRAGM TYPE

- 1** **Standard diaphragm**
- 3** Self-relieving
- 8** Tefzel® ring/metal backing

### SEAT MATERIAL

- A** **Tefzel®**
- B** Ceramic Filled PTFE
- H** PCTFE
- Q** PEEK™

### OPTIONS

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

### GAUGES

- 1** Include gauges
- 2** Omit gauges
- 3** Customer-supplied, to be factory installed

### CGA FITTINGS

- Use '000' to omit CGA
- Use 'CUS' for customer-supplied CGA, to be factory installed

### CAP ASSEMBLY

- 1** **Standard**
- 4** Panel mount
- 7** Captured vent, stainless steel
- 8** Tamper proof
- J** Captured vent, panel mount, stainless steel

### OUTPUT 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

### FLOW COEFFICIENT (Cv)

- 3** **0.06**
- 5** 0.2
- C** 0.025
- H** 0.5

## Maximum Temperature & Operating Inlet Pressures

| SEAT MATERIAL       | MAXIMUM TEMPERATURE* |   | MAXIMUM OPERATING INLET PRESSURE |
|---------------------|----------------------|---|----------------------------------|
| Tefzel®             | 150° F (66° C)       | @ | 3600 psig (24.82 MPa)            |
| PCTFE               | 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)            |
| Ceramic Filled PTFE | 175° F (80° C)       | @ | 3600 psig (24.82 MPa)            |

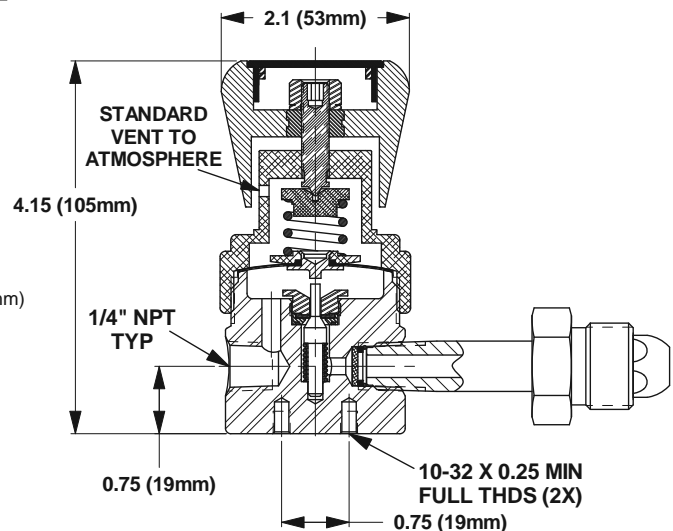
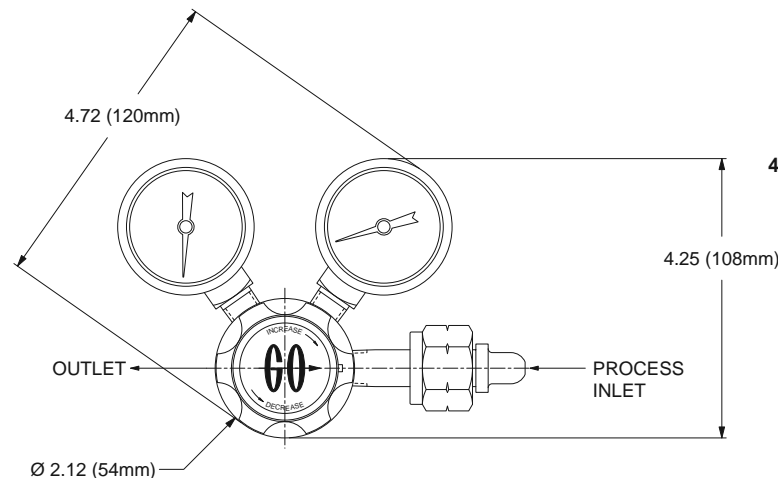
\* Temperatures in excess of 175° F (80° C) require the use of a metal knob or the tamper-proof option.

NOTE: Contact the factory for any additional requirements.

MONEL® is a registered trademark of Special Metals Corporation.  
 Tefzel® is a registered trademark of the DuPont Company.  
 PEEK™ is a trademark of Victrex PLC.

## Outline & Mounting Dimensions

Weight = 1.9 lbs (0.86 kg)



## COM-1 Series

Crossover Manifold Regulator System



The COM-1 Series crossover manifold system consists of two PR-1-type stainless steel regulators (PR-2-type brass, optional) mounted on a panel-mounting-type bracket shown with optional gauges. The primary regulator, supplied with a tamper-proof nut, is set at an outlet operating pressure at least 15 psig higher than the secondary regulator (supplied with a standard adjusting knob). As the primary supply source depletes and the operating outlet pressure of the primary regulator falls below the preset operating pressure of the secondary regulator, the secondary regulator takes over. Once this occurs, the secondary regulator can be manually adjusted 1/8-turn clockwise, the secondary regulator is now the primary and the depleted supply source can be replaced.

### Features & Specifications

- Inlet pressure to 6000 psig
- Outlet pressures range: 0–10 psig, 0–25 psig, 0–50 psig, 0–100 psig, 0–250 psig, or 0–500 psig
- Changeover pressures: 15–250 psig
- Cv flow coefficients: 0.025, 0.06, 0.2, 0.5
- All connections: 1/4" FNPT
- 20 micron inlet filter
- 316L stainless steel construction; Brass and MONEL® optional
- Seat materials of PCTFE, Tefzel®, PEEK™
- Bubble-tight shutoff
- 2" diameter gauges (optional)
- Operating temperatures –40° F to +500° F (–40° C to +260° C)
- Bracket mounted for easy installation
- PTFE lined INCONEL® diaphragm standard

pressure regulators

# COM-1 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**COM1 - 1 A 3 C 1 A**

### BODY MATERIAL

- 1 316L stainless steel, stainless steel diaphragm
- 2 Brass, stainless steel diaphragm
- 4 MONEL®, INCONEL® diaphragm
- C 316L stainless steel, INCONEL® diaphragm**

### SEAT MATERIAL

- A Tefzel®**
- B Ceramic Filled PTFE
- H PCTFE
- Q PEEK™

### OPTIONS

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

### GAUGES

- 1** Include gauges
- 2** Omit gauges
- 3** Customer-supplied, to be factory installed

### OUTPUT 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

### FLOW COEFFICIENT (Cv)

- 3** 0.06
- 5** 0.2
- C** 0.025
- H** 0.5

## Maximum Temperature & Operating Inlet Pressures

| SEAT MATERIAL       | MAXIMUM TEMPERATURE |   | MAXIMUM OPERATING INLET PRESSURE |
|---------------------|---------------------|---|----------------------------------|
| Tefzel®             | 150° F (66° C)      | @ | 3600 psig (24.82 MPa)            |
| PCTFE               | 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)            |
| Ceramic Filled PTFE | 175° F (80° C)      | @ | 3600 psig (24.82 MPa)            |

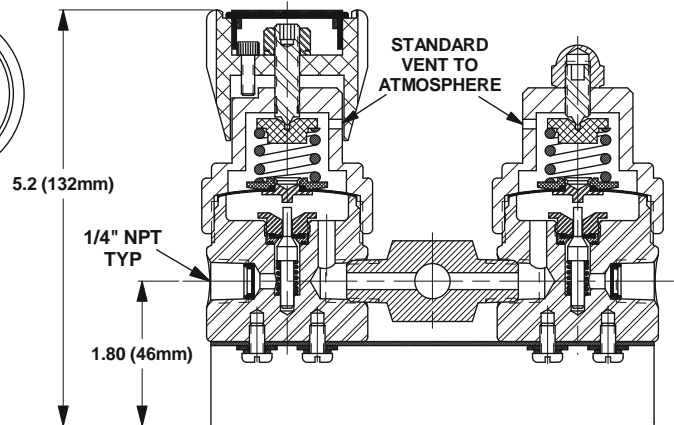
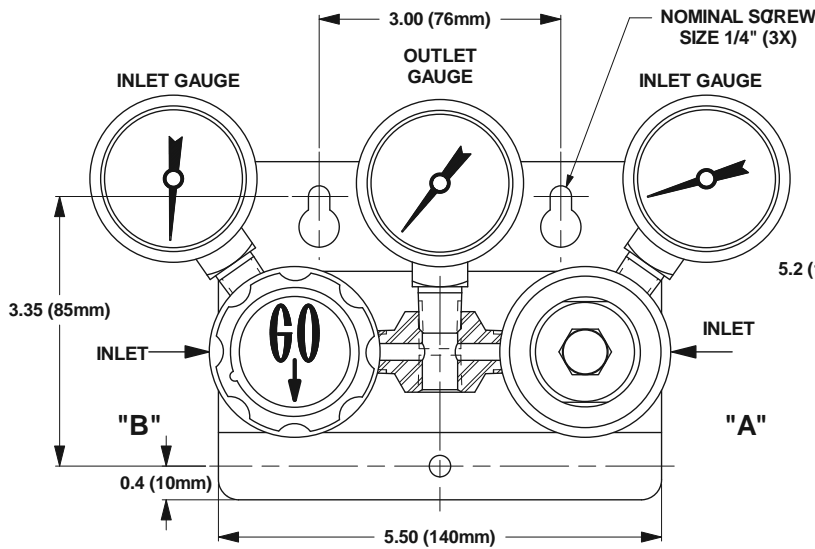
### Brass

| SEAT MATERIAL       | MAXIMUM TEMPERATURE |   | MAXIMUM OPERATING INLET PRESSURE |
|---------------------|---------------------|---|----------------------------------|
| Tefzel®             | 150° F (66° C)      | @ | 3600 psig (24.82 MPa)            |
| PCTFE               | 175° F (80° C)      | @ | 3600 psig (41.37 MPa)            |
| PEEK™               | 175° F (80° C)      | @ | 3600 psig (41.37 MPa)            |
| Ceramic Filled PTFE | 175° F (80° C)      | @ | 3600 psig (24.82 MPa)            |

*NOTE: Contact the factory for any additional requirements.*

## Outline & Mounting Dimensions

Weight = 5.2 lbs (2.36 kg)



MONEL® is a registered trademark of Special Metals Corporation.  
 Tefzel® is a registered trademark of the DuPont Company.  
 PEEK™ is a trademark of Victrex PLC.



## COM-2B Series

Crossover Manifold Regulator System



The COM-2B Series crossover manifold system uses two PR-1-type stainless steel regulators (PR-2-type brass, optional) built in a single body functioning as the changeover regulators with the common outlet port connected to a single line regulator to provide constant unchanging supply pressure unaffected by supply source depletion. All are mounted on a bracket complete with gauges. As the primary supply source depletes and the operating outlet pressure of the primary regulator falls below the preset changeover pressure of the secondary regulator, the secondary regulator takes over. Once this occurs, the primary regulator can be manually adjusted 1/8-turn counterclockwise, the secondary regulator is now the primary and the depleted supply source can be replaced.

### Features & Specifications

- Bracket-mounted for easy installation
- Allows changing of cylinders during operation\*
- Available in stainless steel, brass and MONEL®
- Steady outlet pressure during cylinder depletion
- 0.01% pressure control accuracy
- Inlet pressures to 6000 psig
- Outlet pressure ranges: 0–10 psig, 0–25 psig, 0–50 psig, 0–100 psig or 0–250 psig
- Changeover pressures: 15–250 psig
- Cv flow coefficients: 0.025, 0.06, 0.2, 0.5
- All connections: 1/4" FNPT
- 20 micron inlet filters
- 316L stainless steel construction
- PTFE-lined INCONEL® diaphragm, standard
- Operating temperatures: –40° F to +500° F (–40° C to +260° C)

\* Installation of shut off valves in each inlet port is recommended for complete isolation during change out of cylinders.

pressure regulators

# COM-2B Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**COM2 - 1 A 3 B J 1 1 C L A**

### BODY MATERIAL

- 1 316L stainless steel, stainless steel diaphragm
- 2 Brass, stainless steel diaphragm
- 4 MONEL®, INCONEL® diaphragm
- C 316L stainless steel, INCONEL® diaphragm, standard**

### SEAT MATERIAL

- A Tefzel®**
- B Ceramic Filled PTFE
- H PCTFE
- Q PEEK™

### FLOW COEFFICIENT (Cv)

- 3 0.06**
- 5 0.2
- C 0.025
- H 0.5

### PANEL TYPE

- B Bracket**

### COMBO REGULATOR SET POINT

- J 150 psig over output regulator range**

### COMBO REGULATOR PRESSURE GAUGES

- 1 With gauges**
- 2 Less gauges
- 3 Customer-supplied, to be factory installed

### OPTIONS

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

### OUTPUT REGULATOR PORT CONFIGURATION

- A** A style
- B** B style
- C** C style
- D** D style
- E** E style
- G** G style
- L L style**
- Q** Q style

### OUTPUT REGULATOR OUTPUT RANGE

- C** 0-10 psig
- D** 0-25 psig
- E** 0-50 psig
- G** 0-100 psig
- I** 0-250 psig

### OUTPUT REGULATOR PRESSURE GAUGES

- 1 With gauges**
- 2 Less gauges
- 3 Customer-supplied, to be factory installed

## Maximum Temperature & Operating Inlet Pressures

### Stainless steel

| SEAT MATERIAL       | MAXIMUM TEMPERATURE* | MAXIMUM OPERATING INLET PRESSURE |
|---------------------|----------------------|----------------------------------|
| Tefzel®             | 150° F (66° C)       | @ 3600 psig (24.82 MPa)          |
| PCTFE               | 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)          |
| Ceramic Filled PTFE | 175° F (80° C)       | @ 3600 psig (41.37 MPa)          |

\* Temperatures in excess of 175° F (80° C) require the use of a metal knob or the tamper-proof option.

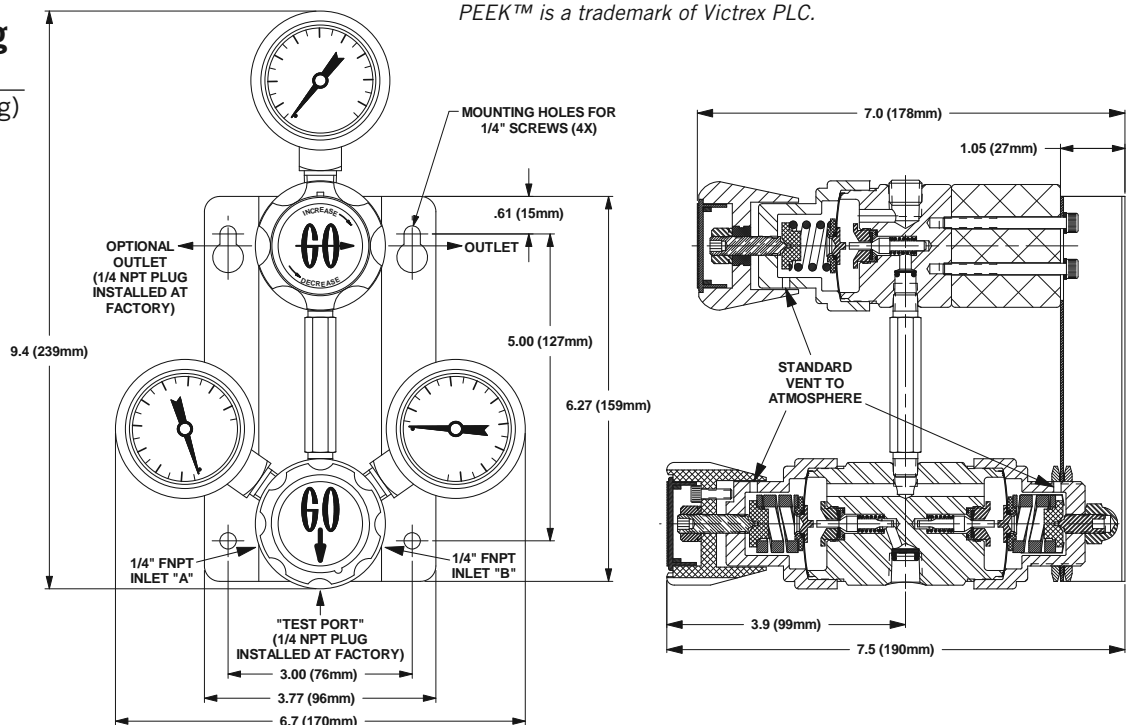
### Brass

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

MONEL® is a registered trademark of Special Metals Corporation.  
 Tefzel® is a registered trademark of the tef Company.  
 PEEK™ is a trademark of Victrex PLC.

## Outline & Mounting Dimensions

Weight = 7.3 lbs (3.31 kg)



NOTE: Contact the factory for any additional requirements.

## COM-2P Series

Crossover Manifold Regulator System



The COM-2P employs two discrete single stage PR-1-type regulators built into a single body. These regulators serve as the primary and secondary changeover regulators with the common outlet port connected to a single PR-1 Series regulator. This allows for the non-stop delivery of gas from bottles with only a 0.01% change in outlet pressure as the inlet pressure varies. The hardware comes mounted in an attractive 300 series stainless steel panel that is suitable for surface mounting near the bottles. Labels are permanently silk-screened on the face of the panel for easy identification of process ports and gauges. The unit comes complete with pressure gauges and shutoff valves. Suitable for gases and liquids.

### Features & Specifications

- Complete panel system including gauges and vent valves for easy installation
- Allows changing of cylinders during operation\*
- Available in both stainless steel and brass (other materials also available)
- Steady outlet pressure during cylinder depletion
- 0.01% pressure control accuracy
- Inlet pressures to 6000 psig
- Outlet pressure ranges 0-10 psig, 0-25 psig, 0-50 psig, 0-100 psig or 0-250 psig
- Changeover pressures: 15-250 psig
- Cv flow coefficients 0.025, 0.06, 0.2, 0.5
- All connections: 1/4" FNPT
- 20 micron sintered inlet filters
- PTFE-lined INCONEL® diaphragm, standard
- Operating temperatures: -40° F to +500° F (-40° C to +260° C)

\* Installation of shut off valves in each inlet port is recommended for complete isolation during change out of cylinders.

pressure regulators

# COM-2P Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**COM2 - 1 A P P J 1 1 C B B**

### BODY MATERIAL

- 1 316L stainless steel, stainless steel diaphragm
- 2 Brass, stainless steel diaphragm
- 4 MONEL®, INCONEL® diaphragm
- C 316L stainless steel, INCONEL® diaphragm, standard**

### SEAT MATERIAL

- A Tefzel®**
- B Ceramic Filled PTFE**
- H PCTFE
- Q PEEK™

### FLOW COEFFICIENT (Cv)

- 3 0.06**
- 5 0.2
- C 0.025**
- H 0.5

### PANEL TYPE

- P Deluxe panel**

### OPTIONS

- B** EB5
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

### OUTPUT REGULATOR PORT CONFIGURATION

- B B style**
- L L style
- E E style

### OUTPUT REGULATOR OUTPUT RANGE

- C** 0-10 psig
- D** 0-25 psig
- E** 0-50 psig
- G** 0-100 psig
- I** 0-250 psig

### OUTPUT REGULATOR PRESSURE GAUGES

- 1 With gauges**
- 3** Customer-supplied, to be factory installed

### COMBO REGULATOR PRESSURE GAUGES

- 1 With gauges**
- 3** Customer-supplied, to be factory installed

### COMBO REGULATOR SET POINT

- J 150 psig over output regulator range**

## Maximum Temperature & Operating Inlet Pressures

| SEAT MATERIAL       | MAXIMUM TEMPERATURE* | MAXIMUM OPERATING INLET PRESSURE |
|---------------------|----------------------|----------------------------------|
| Tefzel®             | 150° F (66° C)       | @ 3600 psig (24.82 MPa)          |
| PCTFE               | 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)          |
| Ceramic Filled PTFE | 175° F (80° C)       | @ 3600 psig (41.37 MPa)          |

\* Temperatures in excess of 175° F (80° C) require the use of a metal knob or the tamper-proof option.

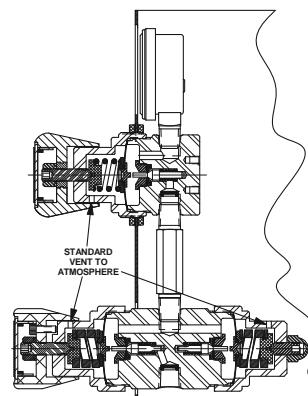
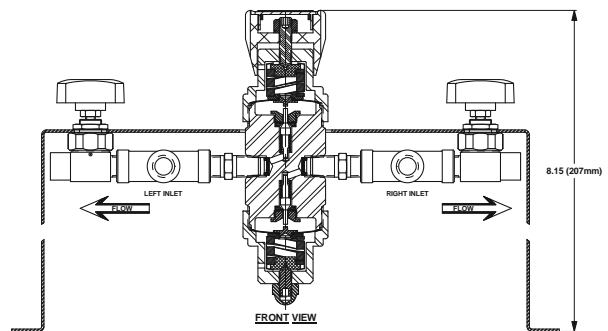
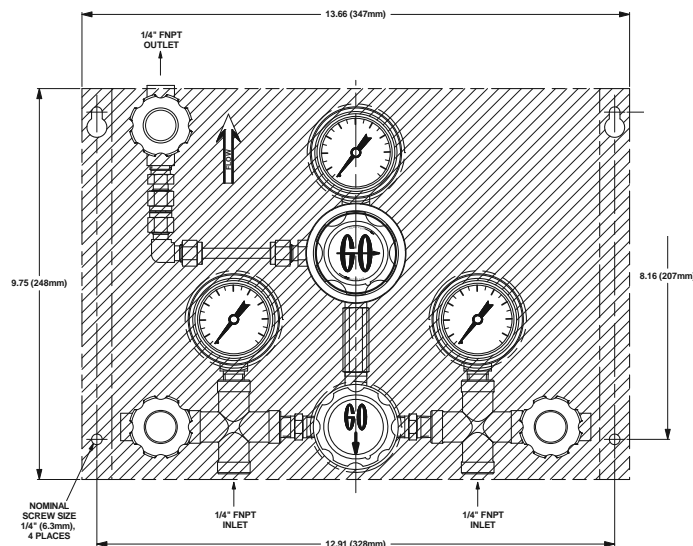
### Brass

| SEAT MATERIAL       | MAXIMUM TEMPERATURE | MAXIMUM OPERATING INLET PRESSURE |
|---------------------|---------------------|----------------------------------|
| Tefzel®             | 150° F (66° C)      | @ 3600 psig (24.82 MPa)          |
| PCTFE               | 175° F (80° C)      | @ 3600 psig (41.37 MPa)          |
| PEEK™               | 175° F (80° C)      | @ 3600 psig (41.37 MPa)          |
| Ceramic Filled PTFE | 175° F (80° C)      | @ 3600 psig (41.37 MPa)          |

NOTE: Contact the factory for any additional requirements.

## Outline & Mounting Dimensions

Weight = 13.4 lbs (6.09 kg)



Tefzel® is a registered trademark of the DuPont Company.  
 MONEL® is a registered trademark of Special Metals Corporation.  
 PEEK™ is a trademark of Victrex PLC.

# GO REGULATOR, INC.

## Back Pressure Regulators

### Index

|                        |                    |
|------------------------|--------------------|
| Safety Warning         | Inside Front Cover |
| BP-3 Series            | 1                  |
| BP-6 Series            | 4                  |
| BP-8 Series            | 7                  |
| BP-8LF Series          | 10                 |
| CBP-3 Series           | 13                 |
| LB-1 Series            | 16                 |
| SBPR Series            | 19                 |
| BP-60 Series           | 22                 |
| BP-66 Series           | 25                 |
| Porting Configurations | 28                 |
| Disclaimers            | Inside Back Cover  |



pressure regulators

## **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. When selecting products, the total system design must be considered to ensure safe, trouble-free performance. 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.

Contact your authorized GO Regulator sales and service representative for information about additional sizes and special alloys.

## **SAFETY WARNING:**

---

GO Regulator products are designed for installation only by professional suitably qualified licensed system installers experienced in the applications and environments for which the products are intended. These products are intended for integration into a system. Where these products are to be used with flammable or hazardous media, precautions must be taken by the system designer and installer to ensure the safety of persons and property. Flammable or hazardous media pose risks associated with fire or explosion, as well as burning, poisoning or other injury or death to persons and/or destruction of property. The system designer and installer must provide for the capture and control of such substances from any vents in the product(s). The system installer must not permit any leakage or uncontrolled escape of hazardous or flammable substances. The system operator must be trained to follow appropriate precautions and must inspect and maintain the system and its components including the product(s) and at regular intervals in accordance with timescales recommended by the supplier to prevent unacceptable wear or failure.

## BP-3 Series

Adjustable Back Pressure Regulators

### Introduction

The BP-3 Series is designed for either liquid or gas service in instrumentation systems. Similar in design to pressure reducing control regulators which regulate outlet pressures, back pressure regulators control the inlet pressure. The many features of this regulator, particularly its precise throttling action, make it ideal for this type of application. In low flow or closed systems, over-pressures often are released by pressure relief valves. This type of relief is on-off with no throttling control. In contrast to relief valves, the back pressure control regulator with its throttling action substantially improves system pressure regulation.



pressure regulators

### Typical Applications

- Analytical instrumentation
- Gas and liquid sampling
- Petrochemical industry
- Air compressors
- Research labs
- Pilot plants

### Technical Data

|                                    |  |
|------------------------------------|--|
| CONSTRUCTION                       | 316L stainless steel   |
| ADJUSTABLE PRESSURE CONTROL RANGES | 0-6, 0-10, 0-25, 0-50, 0-100, 0-250, 0-500, 0-750 & 0-1000 psig        |
| OPERATING TEMPERATURE              | -40° F to +500° F (-40° C to +260° C)                                  |
| C <sub>v</sub> COEFFICIENT         | 0.2  |
| OPTIONAL VARIOUS ORIFICE SIZES     | 0.005, 0.01, 0.025, 0.03, 0.04, 0.05, 0.06, 0.095, 0.12, 0.24, and 0.3 |

### Features & Benefits

- Only 316L stainless steel and PTFE in flow stream
- Bubble tight shutoff
- Gas or liquid service

### Options

- Wetted materials of construction brass, Monel®, Hastelloy® C-276, titanium
- Extra ports
- Panel mount (requires a 1<sup>3</sup>/<sub>8</sub>" mounting hole)
- High purity connections
- Pressure gauges

# Adjustable Back Pressure Regulators

## Maximum Temperature and Control Pressures

| SEAT MATERIAL     | MAXIMUM TEMPERATURE | @ | MAXIMUM CONTROL RANGE |
|-------------------|---------------------|---|-----------------------|
| Viton®            | 250° F (121° C)     | @ | 250 psig (1.71 MPa)   |
| Kalrez®           | 300° F (148° C)     | @ | 250 psig (1.72 MPa)   |
| High Density PTFE | 200° F (93° C)      | @ | 500 psig (5.16 MPa)   |
| Polyimide         | 500° F (260° C)     | @ | 1000 psig (6.88 MPa)  |
| PEEK™             | 500° F (260° C)     | @ | 1000 psig (6.88 MPa)  |

Note: Temperatures in excess of 175° F (79° C) require the use of a metal knob or the tamper proof option.

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

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

**BP3 – 1 A 1 1 D 5 E 1 1 1 A**

**Body Material**

- 1** 316L stainless steel, stainless steel backing
- 2 Brass, stainless steel backing
- 4 Monel®, Inconel® backing
- 5** Hastelloy B®, Inconel® backing
- 6 Hastelloy® C-276, Inconel® backing
- C 316L stainless steel, Inconel® backing

**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)
- 3 ¼" Sch 80 Pipe stub, 4" long (¼" FNPT gauge ports)
- 4** ⅜" FNPT (¼" FNPT gauge ports)
- 6 ½" Tube stub, 2" long (¼" FNPT gauge ports)
- 0 ⅛" FNPT (⅛" FNPT gauge ports)
- K ¼" Sch 40 Pipe stub, 4" long (¼" FNPT gauge ports)

**Cavity Finish**

**1** < 25 Ra

**Actuator Material**

- B** CF PTFE
- C** Polyimide (metal knob standard)
- D** Viton®
- I** High density PTFE
- K** Kalrez®
- Q** PEEK™

**Options**

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

**Cap Assembly**

- 1** Standard
- 4** Panel mount
- 8 Tamper proof
- C Metal knob, panel mount
- E** Tamper proof, panel mount
- G Metal knob
- H ¼" FNPT dome loaded
- L BP-6 Top Works, stainless steel
- O BP-6 Top Works, panel mount, stainless steel

**Diaphragm Facing/Backing Material**

- 1** PTFE / metal backing
- 6 Tefzel® ring / metal backing
- 7 Viton® / metal backing
- 0 PTFE / Hastelloy® C-276

**Diaphragm Type**

- 1** Standard diaphragm
- 4 Vacuum assist spring, standard diaphragm

**Control Range**

- B** 0–6 psig
- C 0–10 psig
- D** 0–25 psig
- E 0–50 psig
- G 0–100 psig
- I 0–250 psig
- J 0–500 psig

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

**5** 0.2

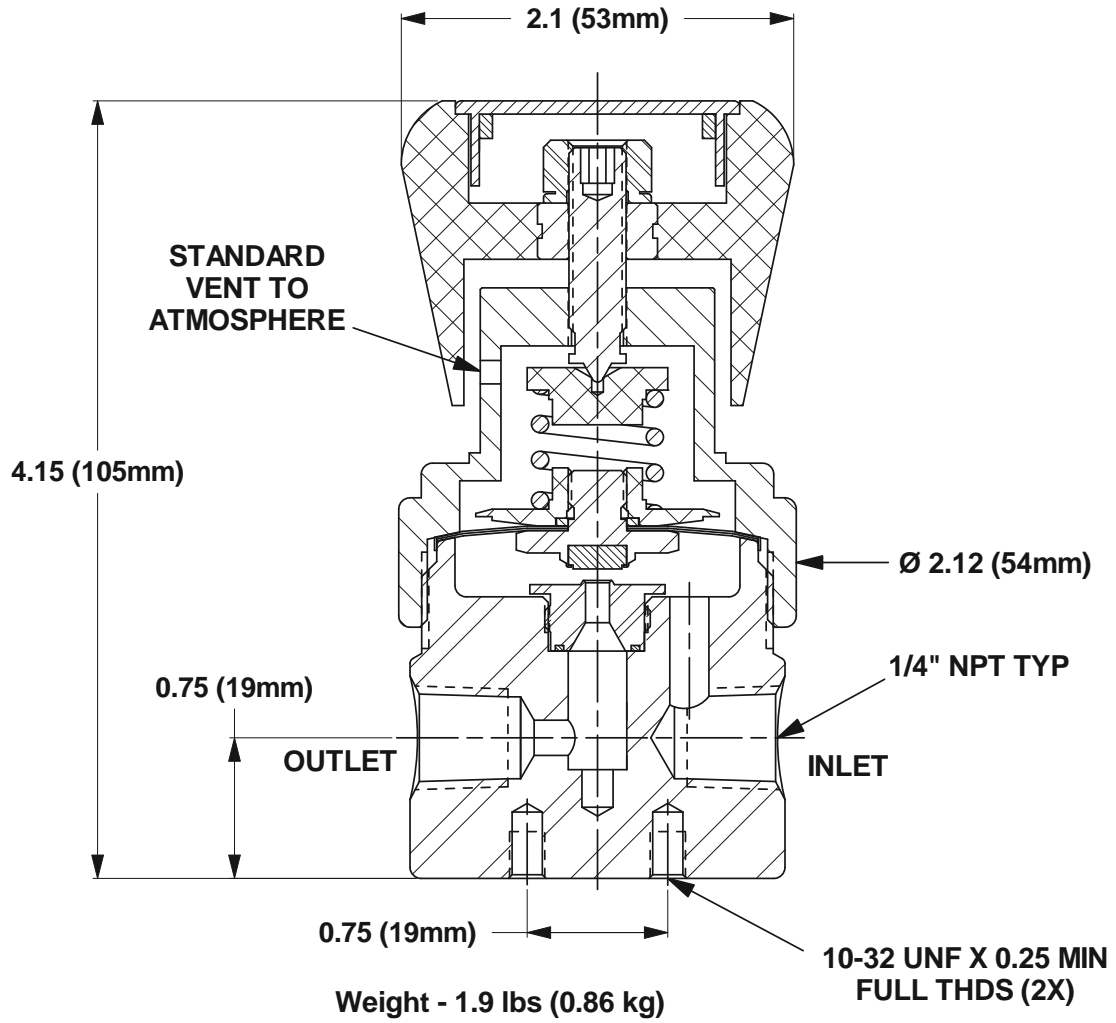
NOTE: The choices above represent an abbreviated list of the more commonly ordered options. For a complete listing of all available options, please see the Selection Wizard on the GO website at [www.goreg.com](http://www.goreg.com) or contact the factory.

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



# Adjustable Back Pressure Regulators

## Outline and Mounting Dimensions



## BP-6 Series

High Flow Back Pressure Regulator

### Introduction

The BP-6 Series was originally designed as a back pressure regulator for reverse osmosis water purification systems. It may also be easily used in pilot facilities and large instrumentation systems. The standard 316 stainless steel seat assembly, which was intended for long term usage in sea water, can also be useful in various chemical environments. While the stainless steel seat assembly does not offer tight shutoff, it is not normally required in high flow systems. If a more positive shutoff is required a PTFE/stainless steel seat assembly is available.

The BP-6 Series is normally provided in 316 stainless steel construction but other materials are available.



pressure regulators

### Typical Applications

- Pilot plants
- Large instrumentation systems
- Reverse osmosis water purification systems

### Technical Data

|  |   |
|--|---|
| <b>CONSTRUCTION</b>                        | 316L stainless steel (standard), Monel®, Hastelloy® C-276, or titanium (optional) |
| <b>ADJUSTABLE STANDARD PRESSURE RANGES</b> | 0–100, 0–250, 0–500 and 0–1000 psig   |
| <b>OPERATING TEMPERATURE</b>               | –40° F to +500° F (–40° C to +260° C)   |
| <b>Cv COEFFICIENT</b>                      | 3.0   |
| <b>INLET &amp; OUTLET CONNECTIONS</b>      | ½" FNPT   |

### Features & Benefits

- Gas or liquid service
- Sensing with PTFE lined stainless diaphragm
- Metal to metal seat

### Options

- Soft seat for bubble tight shutoff
- Panel mounting
- Extra ports
- Special welded connections
- Pressure gauges

# High Flow Back Pressure Regulators

## Maximum Temperature and Control Pressures

| SEAT MATERIAL        | MAXIMUM TEMPERATURE | @ | MAXIMUM CONTROL RANGE |
|----------------------|---------------------|---|-----------------------|
| PTFE                 | 200° F (93° C)      | @ | 1000 psig (6.88 MPa)  |
| 316L stainless steel | 500° F (260° C)     | @ | 1000 psig (6.88 MPa)  |
| Monel®               | 500° F (260° C)     | @ | 1000 psig (6.88 MPa)  |
| Hastelloy® C-276     | 500° F (260° C)     | @ | 1000 psig (6.88 MPa)  |
| Titanium             | 500° F (260° C)     | @ | 1000 psig (6.88 MPa)  |

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

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

**BP6 – 1 A 5 1 G O J 1 1 1 A**

**Body Material**

- 1** 316L stainless steel, stainless steel diaphragm
- 4 Monel®, Inconel® diaphragm
- 6** Hastelloy® C-276, Inconel® backing
- 7 Titanium, Inconel® backing
- C 316L stainless steel, Inconel® backing

**Port Configuration**

- A** Standard (body "A")  
See pg. 28 for port locations.

**Process Port Types**

- 5** ½" FNPT (¼" FNPT gauge ports)
- 6 ½" Tube stub, 2" long (¼" FNPT gauge ports)
- E** ¾" Tube stub, 2" long (¼" FNPT gauge ports)

**Cavity Finish**

- 1** < 25 Ra

**Actuator Material**

- G** 316L stainless steel
- I PTFE
- N Monel®
- P Hastelloy® C-276
- W Titanium

**Options**

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

**Cap Assembly**

- 1** T-handle, stainless steel
- 4** T-handle, panel mount, stainless steel
- L BP-3 Top Works, stainless steel
- O BP-3 Top Works, panel mount, stainless steel

**Diaphragm Facing/Backing Material**

- 1** PTFE / metal backing
- O PTFE / Hastelloy® C-276

**Diaphragm Type**

- 1** Standard diaphragm

**Control Range**

- G** 0–100 psig
- I 0–250 psig
- J 0–500 psig
- K 0–1000 psig

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

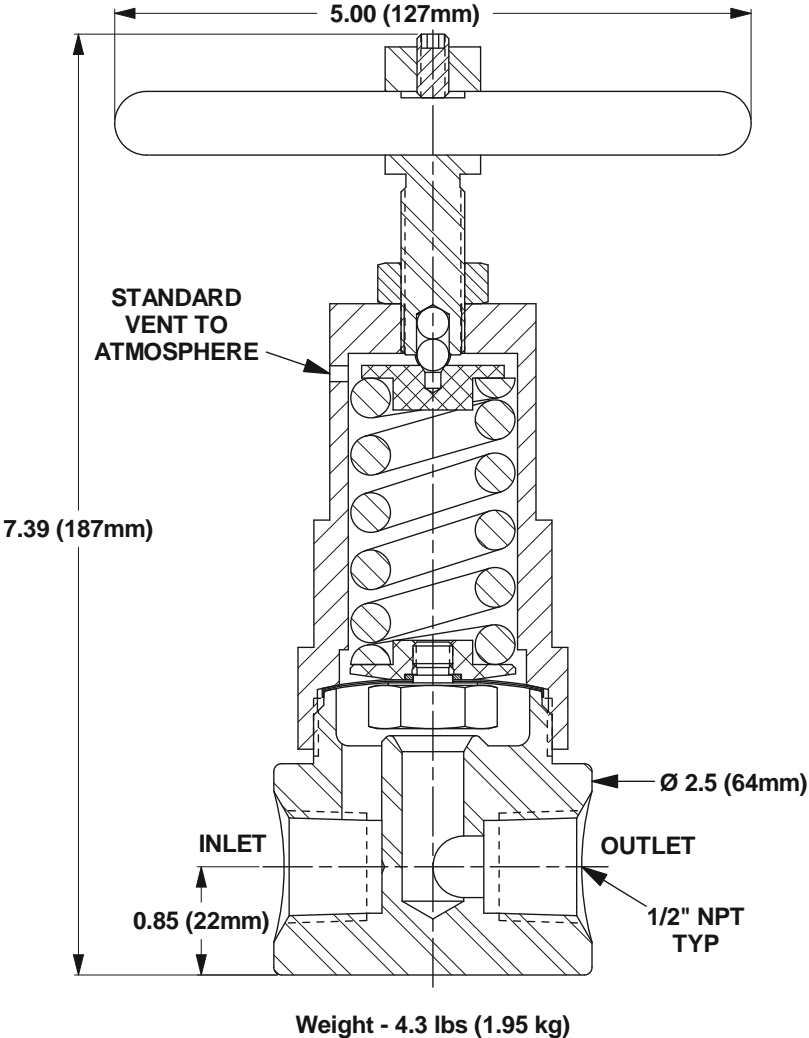
- O** 3.0

*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 Flow Back Pressure Regulators

## Outline and Mounting Dimensions



## BP-8 Series

High Flow Back Pressure Regulators

### Introduction

This series is designed to control back pressure at low to moderate pressure ranges with relatively high flow. While designed primarily for instrumentation systems and similar to the PR-7, the BP-8 is also suitable for pilot plant, research and development activities. Special diaphragm and spring combinations give the user a selection of pressure ranges that are near atmospheric. The glass filled PTFE / stainless steel seat assembly gives tight shut off even at lower flows for most applications.

The 316 stainless steel body assembly provides service for most chemical environments and brass models are available for those applications not requiring that type of corrosion resistance. If special requirements demand other materials of construction, please contact the factory.



pressure regulators

### Typical Applications

- Instrumentation systems
- Pilot plants
- Air compressors

### Technical Data

|  |   |
|--|---|
| <b>CONSTRUCTION</b>                        | 316L stainless steel or brass (standard)<br>Monel® or Hastelloy® C-276 (optional) |
| <b>ADJUSTABLE STANDARD PRESSURE RANGES</b> | 0-10, 0-25, 0-50, 0-100,<br>0-250, and 0-500 psig                                 |
| <b>OPERATING TEMPERATURE</b>               | -40° F to +250° F (-40° C to +121° C)   |
| <b>C<sub>v</sub> COEFFICIENT</b>           | 1.2 (standard)<br>0.40 and 0.70 (optional)  |
| <b>INLET &amp; OUTLET CONNECTIONS</b>      | ¼" FNPT   |

### Features & Benefits

- Pressure control of large flows
- Standard stainless steel diaphragm, PTFE faced

### Options

- Panel mounting
- Extra ports
- ⅜" FNPT, ½" FNPT, ¼" tube weld, ¼" pipe weld, ½" tube weld

# High Flow Back Pressure Regulators

## Maximum Temperature and Control Pressures

| SEAT MATERIAL     | MAXIMUM TEMPERATURE | @ | MAXIMUM CONTROL RANGE |
|-------------------|---------------------|---|-----------------------|
| Viton®            | 250° F (121° C)     | @ | 250 psig (1.72 MPa)   |
| Glass filled PTFE | 250° F (121° C)     | @ | 500 psig (3.44 MPa)   |

Temperatures in excess of 175° F (80° C) require the use of a T-handle or the tamper proof option.

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

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

**BP8 – 1 A 1 1 L 9 G 1 1 1 A**

**Body Material**

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

**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)
- 3 ¼" Sch 80 pipe stub, 4" long (¼" FNPT gauge ports)
- 4 ⅜" FNPT (¼" FNPT gauge ports)
- 5 ½" FNPT (¼" FNPT gauge ports)
- 6 ½" Tube stub, 2" long (¼" FNPT gauge ports)
- K ¼" Sch 40 pipe stub, 4" long (¼" FNPT gauge ports)

**Cavity Finish**

- 1** < 25 Ra

**Actuator Material**

- D** Viton®
- L** Glass filled PTFE®

**Options**

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

**Cap Assembly**

- 1** Standard, stainless steel
- 2 T-handle, stainless steel
- 3 T-handle, panel mount, stainless steel
- 4 Panel mount, stainless steel
- 5 Captured vent, aluminum
- 6 Captured vent, panel mount, aluminum
- 7 Captured vent, stainless steel
- 8 Tamper-proof, stainless steel
- G Metal knob
- H ¼" NPT dome-loaded, stainless steel

**Diaphragm Facing/Backing Material**

- 1** PTFE / metal backing
- 2 PTFE / Viton®
- 6 Tefzel ring / metal backing
- 0 PTFE / Hastelloy® C-276

**Diaphragm Type**

- 1** Standard diaphragm

**Control 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

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

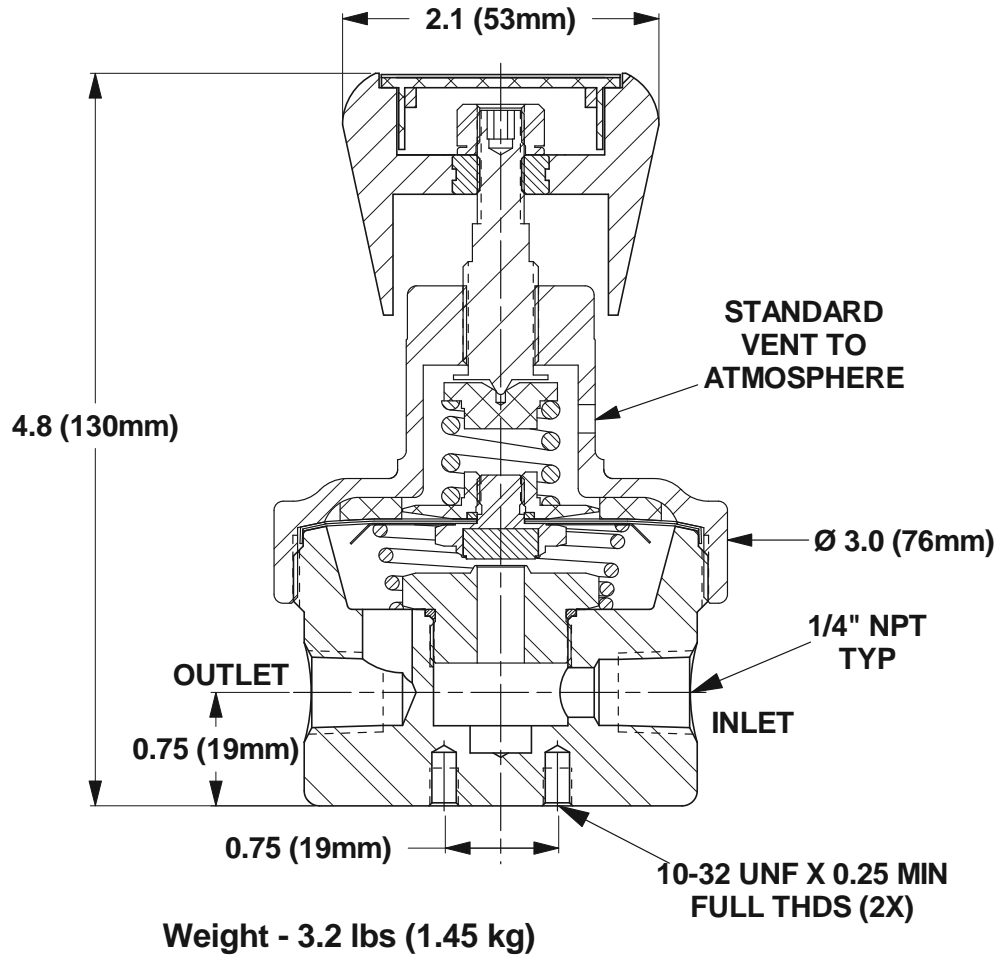
- 9** 1.2
- K** 0.7
- L** 0.4

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 Flow Back Pressure Regulators

## Outline and Mounting Dimensions



## BP-8LF Series

High Sensitivity Back Pressure Regulators

### Introduction

The BP-8LF Series back pressure regulator is designed to furnish precise low back pressure control in analytical instrumentation. With the combination of the large diaphragm sensing area of the BP-8 Series Regulator and the low flow seat assembly of the BP-3 Series pressure regulator, pressure control down to 10 inches of water is easily obtainable.



pressure regulators

### Typical Applications

- Analytical instrumentation
- Gas and liquid sampling
- Research labs

### Features & Benefits

- Sensitive pressure control
- Low pressure adjustability
- Standard PTFE / Viton® diaphragm

### Technical Data

|  |   |
|--|---|
| <b>CONSTRUCTION</b>                        | 316L stainless steel (standard)<br>Monel® or Hastelloy® C-276 (optional)                              |
| <b>ADJUSTABLE STANDARD PRESSURE RANGES</b> | 0–6, 0–25, 0–50, 0–75, 0–125,<br>0–250 & 0–500 psig   |
| <b>OPERATING TEMPERATURE</b>               | –40° F to +500° F (–40° C to +260° C)   |
| <b>C<sub>v</sub> COEFFICIENT</b>           | 0.2 (standard)<br>0.03, 0.05, 0.06, 0.12, 0.24, 0.3,<br>0.095, 0.025, 0.04, 0.005, 0.01<br>(optional) |
| <b>INLET &amp; OUTLET CONNECTIONS</b>      | ¼" FNPT   |

### Options

- PTFE / stainless steel diaphragm



# High Sensitivity Back Pressure Regulators

## Maximum Temperature and Control Pressures

| SEAT MATERIAL     | MAXIMUM TEMPERATURE | @ | MAXIMUM CONTROL RANGE |
|-------------------|---------------------|---|-----------------------|
| Viton®            | 250° F (121° C)     | @ | 500 psig (5.16 MPa)   |
| Kalrez®           | 300° F (148° C)     | @ | 500 psig (5.16 MPa)   |
| High density PTFE | 200° F (93° C)      | @ | 500 psig (5.16 MPa)   |
| Polyimide         | 500° F (260° C)     | @ | 500 psig (5.16 MPa)   |

Temperatures in excess of 175° F (80° C) require the use of a T-handle or the tamper proof option.

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

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

**BP8L – 1 A 1 1 D 5 D 1 2 1 A**

**Body Material**

- 1** 316L stainless steel, stainless steel diaphragm
- 2 Brass, stainless steel diaphragm
- 4 Monel®, Inconel® diaphragm
- C 316L stainless steel, Inconel® diaphragm

**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)
- 5 ½” FNPT (¼” FNPT gauge ports)
- 6 ½” tube stub, 2” long (¼” FNPT gauge ports)

**Cavity Finish**

- 1** < 25 Ra

**Actuator Material**

- B** CF PTFE
- C** Polyimide
- D** Viton®
- I** High density PTFE
- K** Kalrez®

**Options**

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

**Cap Assembly**

- 1** Standard, stainless steel
- 2 T-handle, stainless steel
- 3 T-handle, panel mount, stainless steel
- 4 Panel mount, stainless steel
- 5 Captured vent, aluminum
- 6 Captured vent, panel mount, aluminum
- 7 Captured vent, stainless steel
- 8 Tamper-proof, stainless steel
- 9 Fine adjust, ½” panel mount, stainless steel

**Diaphragm Facing/Backing Material**

- 1** PTFE / metal backing
- 2** PTFE / Viton®
- 5 Viton® / metal backing
- 6 Tefzel® ring / metal backing

**Diaphragm Type**

- 1** Standard diaphragm

**Control Range**

- B** 0– psig
- D** 0–25 psig
- E** 0–50 psig
- F** 0–75 psig
- H** 0–125 psig
- I** 0–250 psig
- J** 0–500 psig

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

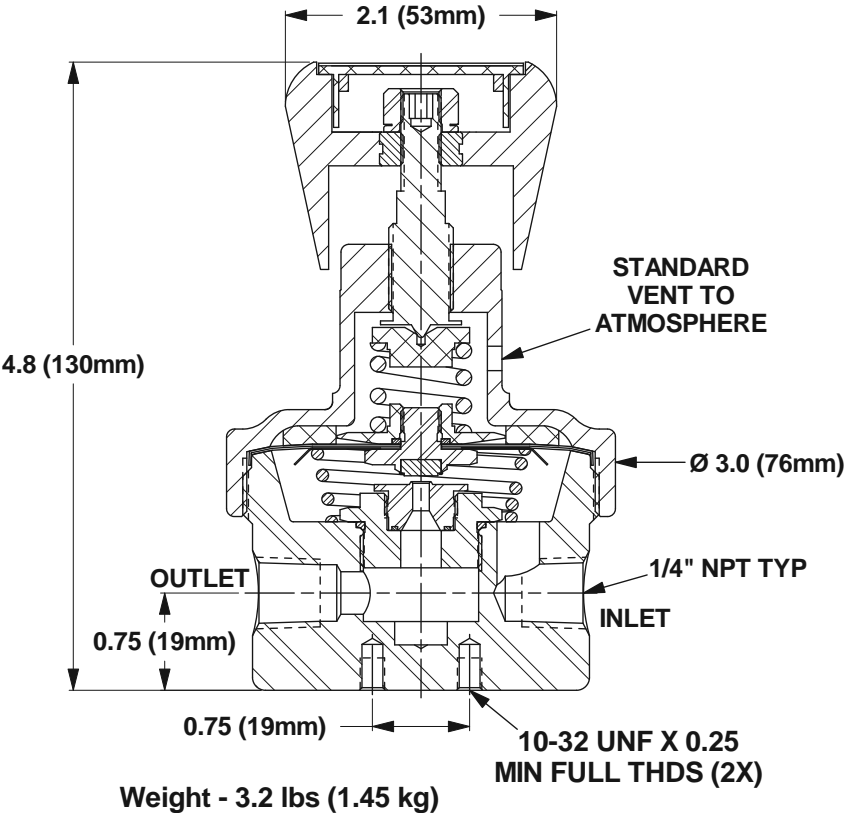
- 5** 0.2

**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 Sensitivity Back Pressure Regulators

## Outline and Mounting Dimensions



## CBP-3 Series

Compact Stainless Steel Back Pressure Regulators

### Introduction

The CBP-3 Series is a compact back pressure regulator with some of the time proven features of the BP-3 Series and new features evolving the compact size. This regulator is designed to allow the construction of compact sophisticated analytical instrumentation where the optimum in back pressure control is required. Standard features allow service in many varied applications including corrosive fluids and with the optional features available, the user can tailor this regulator to virtually any application requiring small to moderate flow rates.



pressure regulators

### Typical Applications

- Analytical instrumentation
- Gas and liquid sampling
- Petrochemical industry
- Air compressors
- Research labs
- Pilot plants

### Technical Data

|  |   |
|--|---|
| <b>CONSTRUCTION</b>                        | 316L stainless steel  |
| <b>ADJUSTABLE STANDARD PRESSURE RANGES</b> | 0-10, 0-25, 0-50, 0-100, 0-250 & 0-500 psig   |
| <b>OPERATING TEMPERATURE</b>               | -40° F to +500° F (-40° C to +260° C)   |
| <b>C<sub>v</sub> COEFFICIENT</b>           | 0.2 (standard)<br>0.005, 0.01, 0.025, 0.03, 0.04, 0.05, 0.06, 0.095, 0.12, 0.24, 0.3 (optional) |
| <b>INLET &amp; OUTLET CONNECTIONS</b>      | 1/8" FNPT   |

### Features & Benefits

- Gas or liquid service
- Bubble tight shutoff
- Compact size
- Tefzel® or Kalrez® in flow stream

### Options

- Panel mount (requires a 1 3/8" mounting hole)
- Extra ports
- Special welded connections
- Pressure gauges

# Compact Stainless Steel Back Pressure Regulators

## Maximum Temperature and Control Pressures

| SEAT MATERIAL | MAXIMUM TEMPERATURE | @ | MAXIMUM CONTROL RANGE |
|---------------|---------------------|---|-----------------------|
| Viton®        | 250° F (121° C)     | @ | 250 psig (1.72 MPa)   |
| Kalrez®       | 300° F (148° C)     | @ | 250 psig (1.72 MPa)   |
| Tefzel®       | 175° F (80° C)      | @ | 500 psig (3.44 MPa)   |
| Polyimide     | 500° F (260° C)     | @ | 500 psig (3.44 MPa)   |

To Order, contact your local Distributor Link below:

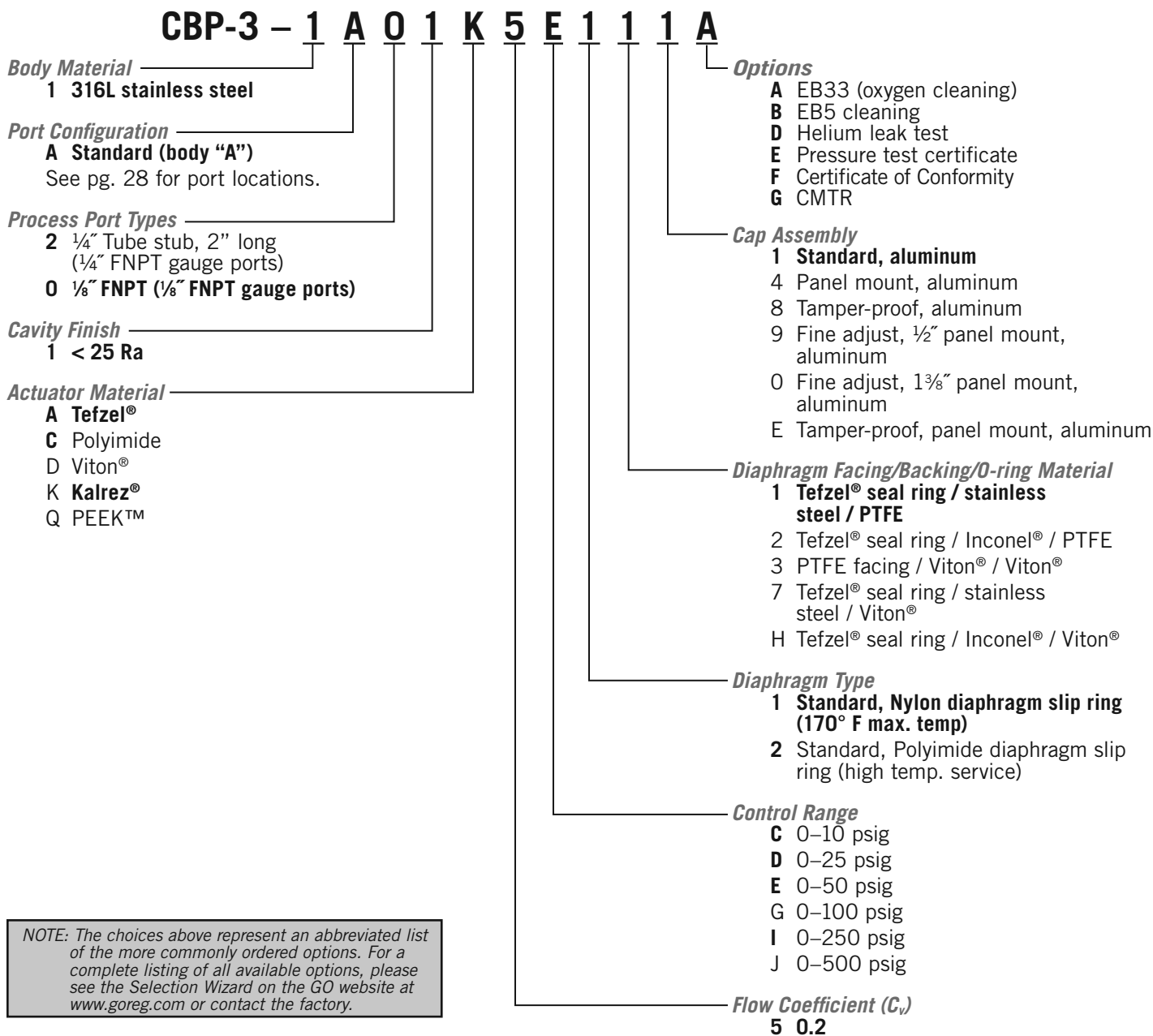
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at

[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

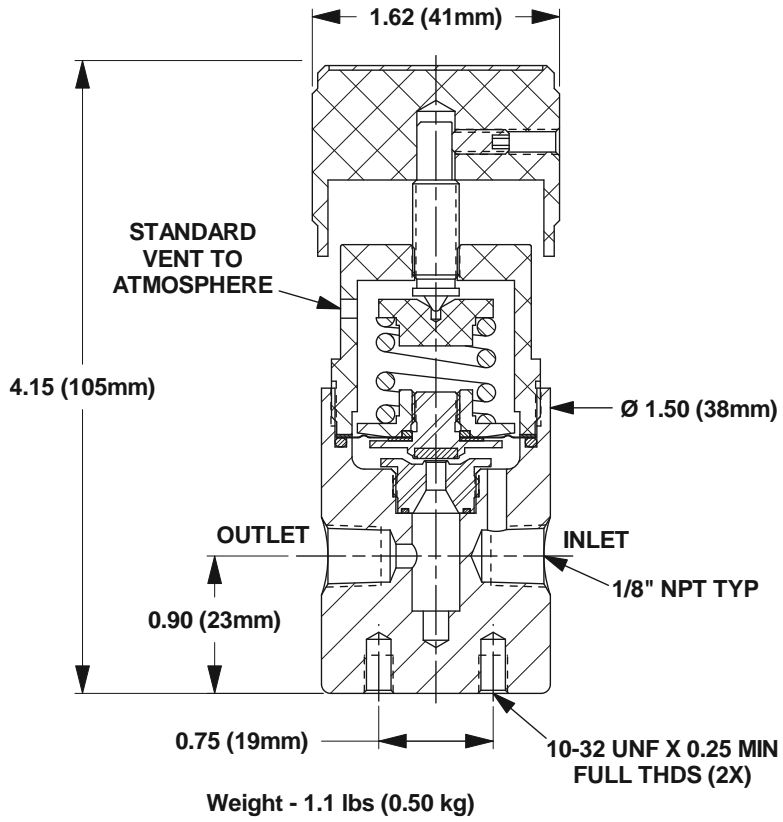
For additional configurations, consult the factory. **Standard items in bold.**



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

# Compact Stainless Steel Back Pressure Regulators

## Outline and Mounting Dimensions



## LB-1 Series

Ultra-miniature Back Pressure Regulators

### Introduction

The LB-1 is an ultra-miniature back pressure regulator that employs many of the same features found in the time-tested design of the CBP-3 & BP-3 Series back pressure regulators. Designed for surface, panel or manifold mounting, the LB-1 offers the utmost in versatility to the systems designer. It's low internal volume of less than 3cc makes the LB-1 the perfect choice for systems that require rapid purge cycles. Standard features permit using this regulator in a wide variety of services, including corrosive fluids. The LB-1 can be tailored to virtually any application by choosing the optional features. This regulator is designed to allow the construction of compact and sophisticated analytical instrumentation where the optimum in back pressure control is required and space is at a premium.



pressure regulators

### Typical Applications

- Instrumentation systems requiring rapid purge cycles
- Systems with limited space availability
- Analytical instrumentation
- Gas and liquid sampling
- Research labs

### Features & Benefits

- Gas or liquid service
- Bubble tight shutoff

### Technical Data

|                                     |  |
|-------------------------------------|--|
| CONSTRUCTION                        | 316L stainless steel, aluminum, brass, or Monel® |
| ADJUSTABLE STANDARD PRESSURE RANGES | 0–10, 0–25, 0–50, 0–100, 0–250 and 0–500 psig    |
| OPERATING TEMPERATURE               | –40° F to +500° F (–40° C to +260° C)            |
| C <sub>v</sub> COEFFICIENT          | 0.2  |

# Ultra-miniature Back Pressure Regulators

## Maximum Temperature and Control Pressures

| SEAT MATERIAL | MAXIMUM TEMPERATURE | @ | MAXIMUM CONTROL RANGE |
|---------------|---------------------|---|-----------------------|
| Viton®        | 250° F (121° C)     | @ | 250 psig (1.72 MPa)   |
| Kalrez®       | 300° F (148° C)     | @ | 250 psig (1.72 MPa)   |
| Tefzel®       | 175° F (80° C)      | @ | 500 psig (3.44 MPa)   |
| Polyimide     | 500° F (260° C)     | @ | 500 psig (3.44 MPa)   |
| PEEK™         | 500° F (260° C)     | @ | 500 psig (3.44 MPa)   |

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

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

**LB1 - 1 A 0 1 D 5 E 1 1 1 A**

**Body Material**

- 1 316L stainless steel**
- 2 Brass
- 3 Aluminum
- 4 Monel®

**Port Configuration**

- A Standard (body "A")**  
See pg. 29 for port locations.

**Process Port Types**

- 0** 1/8" FNPT (all ports)
- 1 Surface mount
- A** 1/16" FNPT (all ports)
- B 1/8" FNPT inlets; 1/16" FNPT outlets

**Cavity Finish**

- 1 < 25 Ra**

**Actuator Material**

- A Tefzel®**
- C Polyimide
- D Viton® (0-250 psig max.)**
- K Kalrez® (0-250 psig max.)
- Q PEEK™

**Options**

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

**Cap Assembly**

- 1 Hand knob (0-100 psig max.)**
- 2 T-handle
- 3 T-handle, panel mount
- 4 Handle knob, panel mount (1-100 psig max.)
- 8 Tamper-proof

**Diaphragm Facing/Backing/O-ring Material**

- 1 Tefzel® seal ring / stainless steel / PTFE**
- 2 Tefzel® seal ring / Inconel® / PTFE
- 3 PTFE facing / Viton® / Viton®
- 7 Tefzel® seal ring / stainless steel / Viton®
- H Tefzel® seal ring / Inconel® / Viton®

**Diaphragm Type**

- 1 Standard, Nylon diaphragm slip ring (170° F max. temp)**
- 2 Standard, Polyimide diaphragm slip ring (high temp. service)**

**Control 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

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

- 1** 0.03
- 2** 0.05
- 3 0.06
- 4 0.12
- 5** **0.2**
- 6 0.24
- 7 0.3
- A 0.095
- C 0.025
- E 0.04
- I 0.005
- J 53

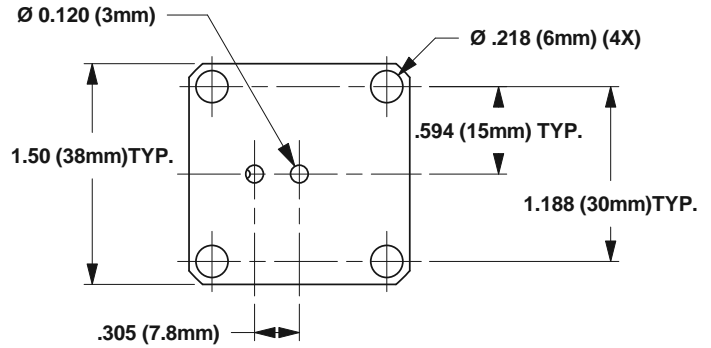
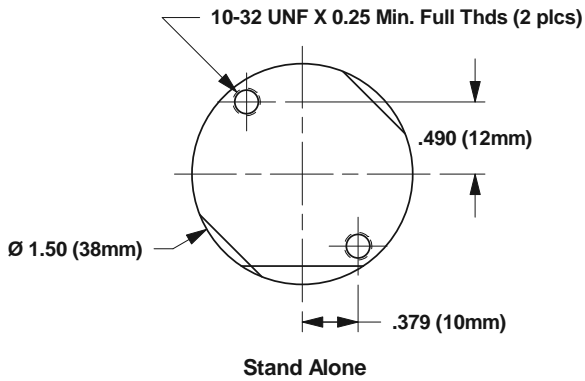
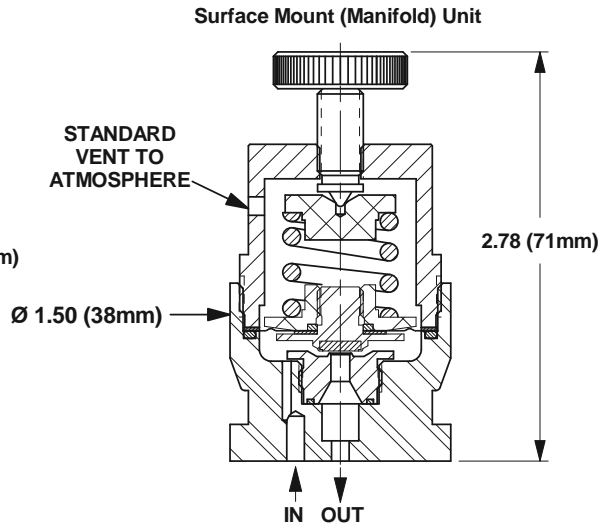
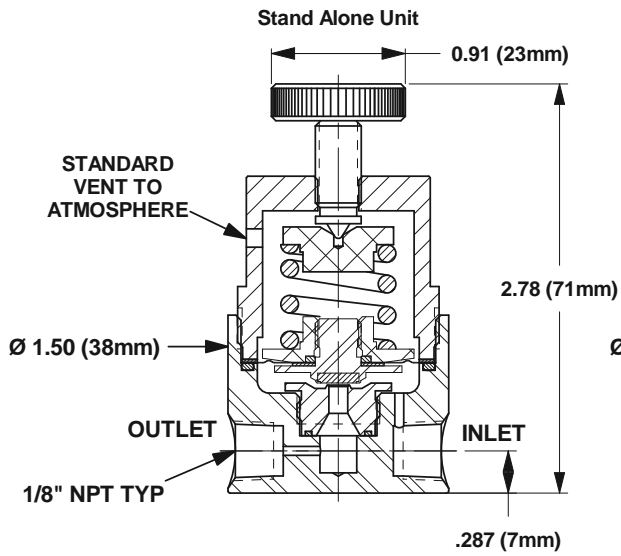
*NOTE: The choices above represent an abbreviated list of the more commonly ordered options. For a complete listing of all available options, please see the Selection Wizard on the GO website at [www.goreg.com](http://www.goreg.com) or contact the factory.*

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

# Ultra-miniature Back Pressure Regulators

## Outline and Mounting Dimensions

Weight - 0.75 lbs (0.34 kg)





## SBPR Series

Subatmospheric Back Pressure Regulators

### Introduction

The SBPR Series subatmospheric back pressure regulator is designed to provide precise upstream vacuum control. One example of this could be to introduce a sample gas at a positive pressure into a vacuum chamber. Downstream from this chamber would be the SBPR and a vacuum pump. The positive pressure will build up in the chamber causing the SBPR to open and allow the chamber to return to the vacuum desired. The SBPR will then close and the process will repeat. The large diameter diaphragm aided by a vacuum assist spring, provides the user with optimum sensitivity for subatmospheric pressure control.



pressure regulators

### Typical Applications

- Analytical instrumentation
- Gas and liquid sampling
- Research labs

### Technical Data

|   |  |
|---|--|
| <b>CONSTRUCTION</b>                       | 316L stainless steel or brass (standard)<br>Monel® and Hastelloy® C-276 (optional) |
| <b>ADJUSTABLE PRESSURE CONTROL RANGES</b> | 1–30 psia (–27.7 in. H <sub>2</sub> O to 15.3 psig)                                |
| <b>OPERATING TEMPERATURE</b>              | –40° F to +300° F (–40° C to +148° C)  |
| <b>C<sub>v</sub> COEFFICIENT</b>          | 0.2  |
| <b>INLET/OUTLET CONNECTIONS</b>           | ¼" FNPT  |

### Features & Benefits

- Subatmospheric or positive back pressure control
- Large diaphragm for sensitive pressure control

### Options

- Extra ports
- Panel mount (requires a 1 $\frac{3}{8}$ " mounting hole)
- Pressure gauges
- Optional welded connections
- Smaller orifice sizes available: 0.005, 0.03

# Subatmospheric Back Pressure Regulators

## Maximum Temperature and Control Pressures

| SEAT MATERIAL | MAXIMUM TEMPERATURE | @ | MAXIMUM CONTROL RANGE |
|---------------|---------------------|---|-----------------------|
| Viton®        | 250° F (121° C)     | @ | 1–30 psia             |
| Kalrez®       | 300° F (148° C)     | @ | 1–30 psia             |
| Teflon®       | 200° F (93° C)      | @ | 1–30 psia             |

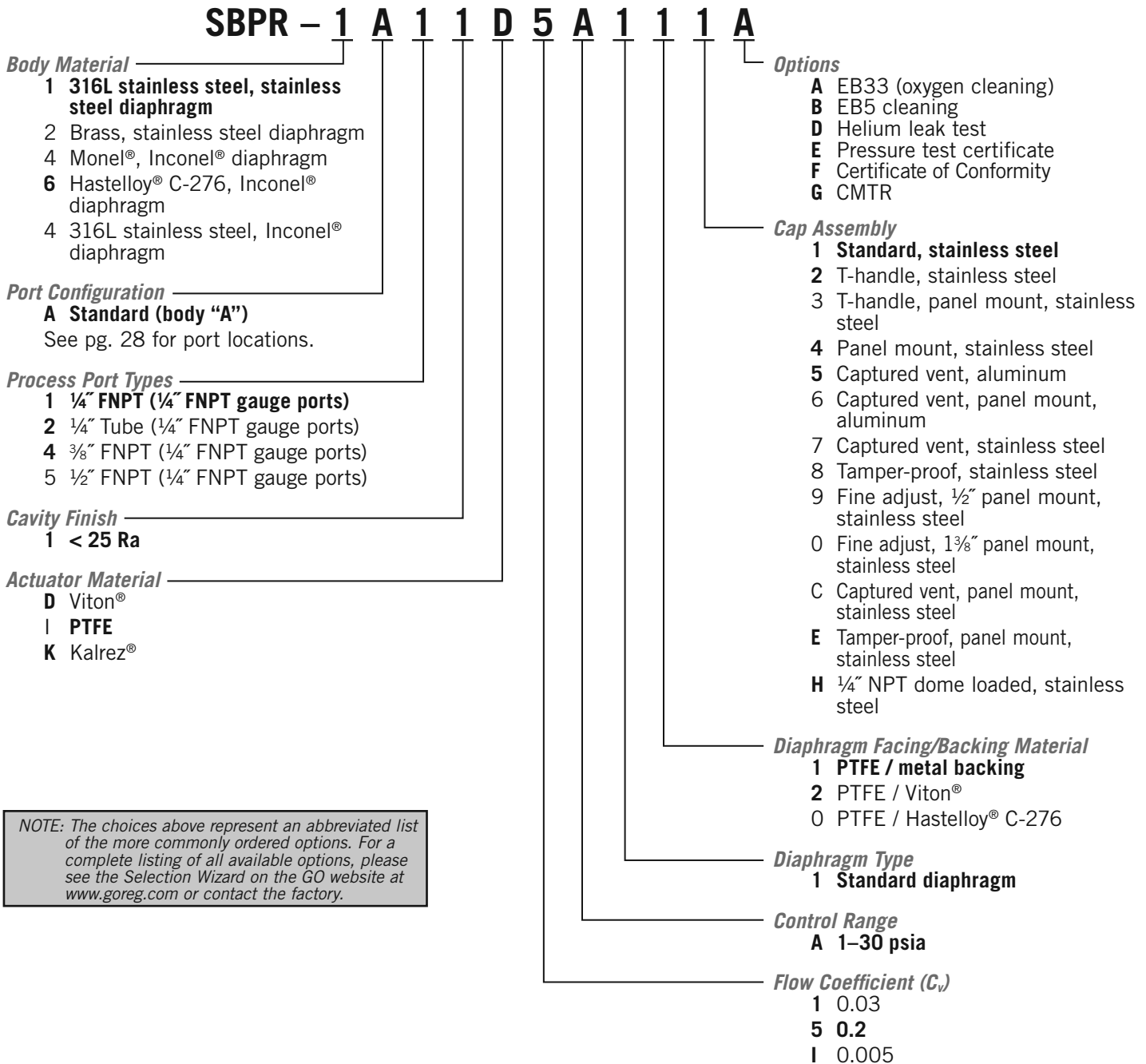
Temperatures in excess of 175° F (80° C) require the use of a T-handle or the tamper proof option.

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

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

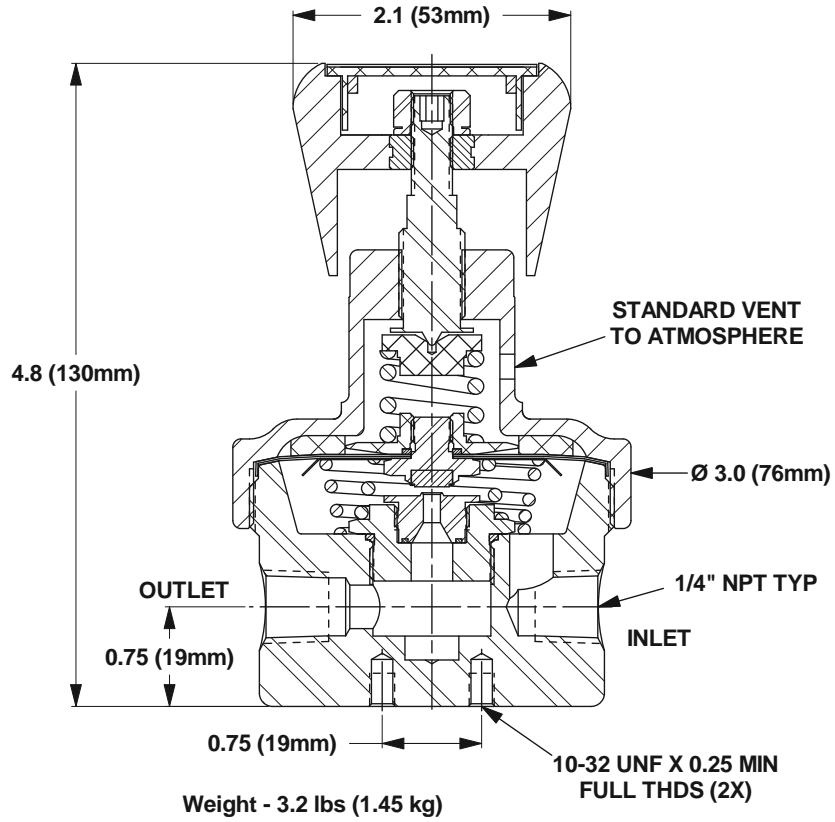


NOTE: The choices above represent an abbreviated list of the more commonly ordered options. For a complete listing of all available options, please see the Selection Wizard on the GO website at [www.goreg.com](http://www.goreg.com) or contact the factory.

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

# Subatmospheric Back Pressure Regulators

## Outline and Mounting Dimensions



## 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.



pressure regulators

### Typical Applications

- Sampling Systems
- Pilot plants
- Research labs

### Technical Data

|   |   |
|---|---|
| <b>CONSTRUCTION</b>                       | 316L stainless steel or brass (alloy 360)<br>Monel® and Hastelloy® C-276 (optional) |
| <b>ADJUSTABLE PRESSURE CONTROL RANGES</b> | 0–500, 0–1000 and 0–2000 psig   |
| <b>OPERATING TEMPERATURE</b>              | –40° F to +350° F (–40° C to +175° C)   |
| <b>C<sub>v</sub> COEFFICIENT</b>          | 0.04  |
| <b>INLET/OUTLET CONNECTIONS</b>           | 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
- ⅜" FNPT, AN 10050-4, SAE J514 or MS 33649 connections

# 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) |

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

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

**BP60 – 1 A 1 1 C E J 1 2 1 A**

### Body Material

- 1** 316L stainless steel
- 2 Brass
- 4 Mone®
- 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™

### Options

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

### 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>O</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/<br>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.

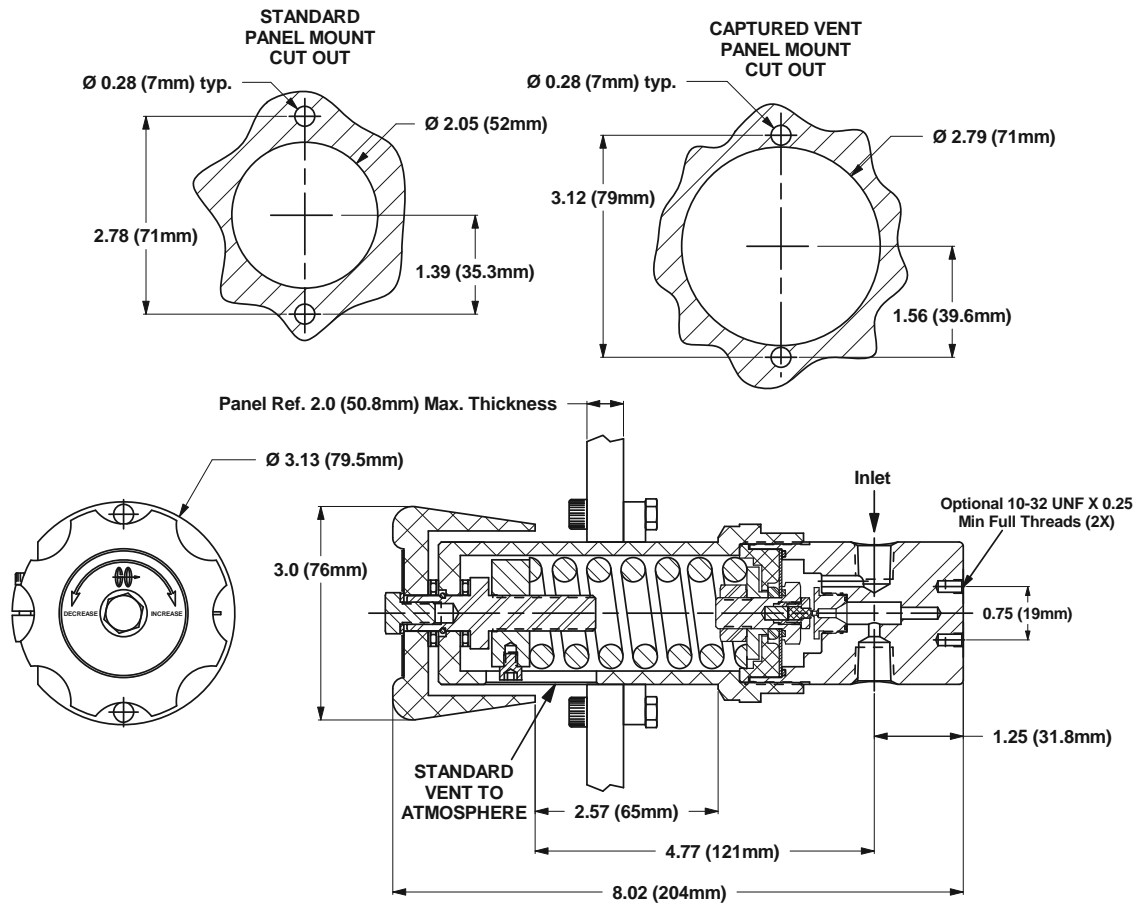
For flow curve charts, visit <http://www.goreg.com>.

# High Pressure Back Pressure Regulators

## Outline and Mounting Dimensions

### Outline and Mounting Dimensions

Weight = 4.4 lbs (2.0 kg)



## BP-66 Series

High Pressure Back Pressure Regulators (10,000 psig)

### Introduction

The BP-66 Series is the counterpart of the PR-57 pressure reducing series for systems that are higher in pressure and low to moderate flows. This regulator has piston sensing to provide relief at high pressures. The Polyimide/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-57 companion unit. Good sensitivity and a selection of control ranges make this regulator an excellent selection in many research and pilot plant facilities.



pressure regulators

### Typical Applications

- Pilot plants
- Research labs

### Technical Data

|   |  |
|---|--|
| <b>CONSTRUCTION</b>                       | 316L stainless steel (standard)<br>Monel® and titanium (optional)              |
| <b>ADJUSTABLE PRESSURE CONTROL RANGES</b> | 0–2000, 0–4000, 0–6000, 0–7500<br>and 0–10,000 psig                            |
| <b>OPERATING TEMPERATURE</b>              | –40° F to +350° F (–40° C to +177° C)  |
| <b>C<sub>v</sub> COEFFICIENT</b>          | 0.04 (standard)<br>0.01 and 0.12 (optional)                                    |
| <b>INLET/OUTLET CONNECTIONS</b>           | ¼" FNPT (standard)<br>AN 10050-4, SAE J514,<br>MS 33649, or ⅜" FNPT (optional) |

### Features & Benefits

- Spring-loaded piston sensor
- Gas and liquid service
- Viton® seals (other elastomers optional)

### Options:

- Panel mounting
- Monel® and titanium body construction
- Cv of 0.01 or 0.12
- AN 10050-4, SAE J514, MS 33649 or ⅜" FNPT connections

# High Pressure Back Pressure Regulators (10,000 psig)

## Maximum Temperature and Control Pressures

| SEAT MATERIAL | MAXIMUM TEMPERATURE | @ | MAXIMUM CONTROL RANGE  |
|---------------|---------------------|---|------------------------|
| Polyimide     | 350° F (177° C)     | @ | 10,000 psig (68.8 MPa) |
| PEEK™         | 350° F (177° C)     | @ | 10,000 psig (68.8 MPa) |

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

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

**BP66 – 1 A 1 1 C E N 1 5 1 A**

**Body Material**

- 1** 316L stainless steel
- 4 Monel®
- 7 Titanium

**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**

- C** Polyimide
- Q PEEK™

**Options**

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

**Cap Assembly**

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

**Piston Material**

- 5** Stainless steel with standard Viton® cavity o-ring
- 6 Stainless steel with optional PTFE cavity o-ring
- B Monel®
- S Titanium

**Piston Type**

- 1** Standard

**Control Range**

- L 0–2000 psig
- N 0–4000 psig
- O 0–6000 psig
- P 0–7500 psig
- Q 0–10,000 psig

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

- 4** 0.12
- E** **0.04**
- 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>.

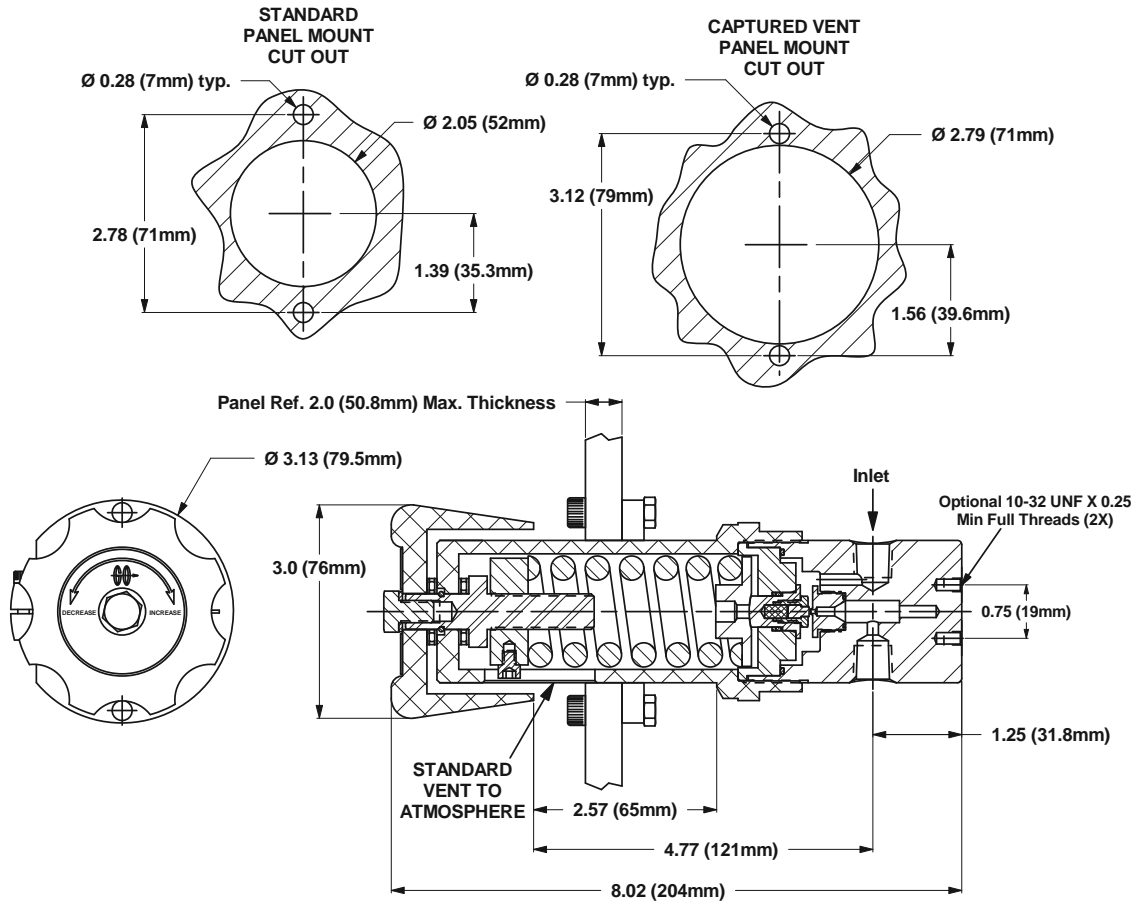


# High Pressure Back Pressure Regulators (10,000 psig)

## Outline and Mounting Dimensions

### Outline and Mounting Dimensions

Weight = 4.4 lbs (2.0 kg)



# GO REGULATOR, INC.

## Dome Loaded Pressure Regulators

### Index

|                        |                    |
|------------------------|--------------------|
| Safety Warning         | Inside Front Cover |
| DL-50                  | 1                  |
| DL-56                  | 3                  |
| DL-57                  | 5                  |
| DL-59                  | 7                  |
| Porting Configurations | 9                  |
| Disclaimers            | Inside Back Cover  |



pressure regulators



## **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. When selecting products, the total system design must be considered to ensure safe, trouble-free performance. 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.

Contact your authorized GO Regulator sales and service representative for information about additional sizes and special alloys.

## **SAFETY WARNING:**

---

GO Regulator products are designed for installation only by professional suitably qualified licensed system installers experienced in the applications and environments for which the products are intended. These products are intended for integration into a system. Where these products are to be used with flammable or hazardous media, precautions must be taken by the system designer and installer to ensure the safety of persons and property. Flammable or hazardous media pose risks associated with fire or explosion, as well as burning, poisoning or other injury or death to persons and/or destruction of property. The system designer and installer must provide for the capture and control of such substances from any vents in the product(s). The system installer must not permit any leakage or uncontrolled escape of hazardous or flammable substances. The system operator must be trained to follow appropriate precautions and must inspect and maintain the system and its components including the product(s) and at regular intervals in accordance with timescales recommended by the supplier to prevent unacceptable wear or failure.

## DL-50 Series

### Dome-loaded Pressure Regulator

The DL-50 is a compact and robust design which employs a unique “Dual Piston” set up that enables the user to control pressure up to 6000 psig (414 bar) with as little as 100 psig (7 bar) of dome pressure. All of this is accomplished within the smallest envelope the industry has to offer.

The regulator portion of this unit was patterned after the time tested PR-50 Series, which is widely recognized as a benchmark of performance and quality. Offering the utmost in economy and safety, this unit is constructed from 316L stainless steel. A carefully engineered diaphragm/piston sensor unit offers good sensitivity and repeatability.

Completing this design is the addition of a 316 stainless steel dome unit. The inlet ring to the dome is freely rotating and captured by a high tensile snap ring. This feature allows easy positioning and alignment of the dome gas line within a customer’s system while maintaining excellent leak integrity.



pressure regulators

#### Typical Applications

- Pilot plant
- Off-shore oil and gas rigs
- Pneumatic test benches
- Component testing
- R & D systems
- High pressure booster systems

#### Features & Benefits

- Gas or liquid service
- Better than 25 Ra finish in diaphragm cavity
- 20 micron inlet filter
- Bubble-tight shutoff
- Diaphragm type sensing
- Remote dome-loading

#### Technical Data

|                           |  |
|---------------------------|--|
| <b>CONSTRUCTION</b>       | 316L stainless steel construction<br>(Brass and MONEL® optional) |
| <b>DOMES RATIOS</b>       | 11.5 : 1, 20 : 1   |
| <b>INLET/OUTLET PORTS</b> | ¼" FNPT (standard)   |
| <b>OUTLET PRESSURE</b>    | up to 2000 psig (138 bar)  |
| <b>Cv COEFFICIENTS</b>    | 0.025, 0.06, 0.2   |

# DL-50 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold.

**DL50 - 1 A 1 1 C 3 1 1 6 3 A**

### BODY MATERIAL

- 1** 316L stainless steel
- 2 Brass
- 4 MONEL®

### PORT CONFIGURATIONS

- A** Standard
- For more port configurations, see page 9.

### PROCESS PORT TYPES

(GAUGE PORT TYPE, IF SPECIFIED)

- 1** 1/4" FNPT (1/4" FNPT gauge ports)
- 4 3/8" FNPT (1/4" FNPT gauge ports)

### SURFACE FINISH OF DIAPHRAGM CAVITY

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

### SEAT MATERIAL

- A** Tefzel®
- H** PCTFE
- Q** PEEK™

### OPTIONS

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

### DIAPHRAGM FACING/BACKING MATERIAL

|          | Facing    | Backing | O-rings | Actuator  |
|----------|-----------|---------|---------|-----------|
| <b>1</b> | St. steel | Nylon   | Viton®  | St. steel |
| <b>2</b> | —         | Nylon   | PTFE    | St. steel |
| <b>3</b> | Polyimide | Nylon   | Viton®  | St. steel |
| <b>4</b> | St. steel | Nylon   | PTFE    | St. steel |
| <b>5</b> | —         | Nylon   | PTFE    | MONEL®    |
| <b>6</b> | Polyimide | Nylon   | PTFE    | St. steel |
| <b>7</b> | INCONEL®  | Nylon   | Viton®  | MONEL®    |
| <b>8</b> | INCONEL®  | Nylon   | PTFE    | MONEL®    |
| <b>B</b> | —         | Nylon   | Viton®  | MONEL®    |
| <b>H</b> | —         | Nylon   | Viton®  | St. steel |
| <b>Q</b> | St. steel | PTFE    | PTFE    | St. steel |
| <b>V</b> | INCONEL®  | PTFE    | PTFE    | MONEL®    |

### DIAPHRAGM TYPE

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

### DIAPHRAGM RATIO

- 1** 11.5 : 1
- 2** 20 : 1

### FLOW COEFFICIENT (CV)

- 3** **0.06**
- 5** 0.2
- C** 0.025

NOTE: Contact the factory for any additional requirements.

## Maximum Temperature & Operating Inlet Pressures

### Nylon Diaphragm Backing

| SEAT MATERIAL | MAXIMUM TEMPERATURE | @ | MAXIMUM OPERATING INLET PRESSURE |
|---------------|---------------------|---|----------------------------------|
| Tefzel®       | 150° F (66° C)      | @ | 3600 psig (248 bar)              |
| PCTFE         | 175° F (80° C)      | @ | 6000 psig (414 bar)              |
| PEEK™         | 175° F (80° C)      | @ | 6000 psig (414 bar)              |

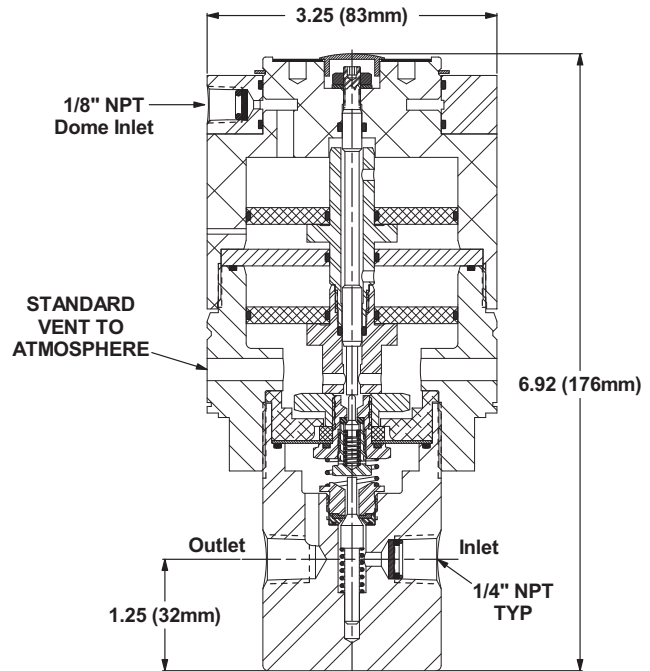
### PTFE Diaphragm Backing

| SEAT MATERIAL | MAXIMUM TEMPERATURE | @ | MAXIMUM OPERATING INLET PRESSURE |
|---------------|---------------------|---|----------------------------------|
| Tefzel®       | 150° F (66° C)      | @ | 3600 psig (248 bar)              |
| PCTFE         | 175° F (80° C)      | @ | 6000 psig (414 bar)              |
| PEEK™         | 350° F (177° C)     | @ | 6000 psig (414 bar)              |

MONEL® is a registered trademark of Special Metals Corporation.  
 Tefzel® is a registered trademark of the DuPont Company.  
 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.

## Outline and Mounting Dimensions

Weight = 5.1 lbs (2.31kg)



11.5:1 RATIO, S/R, 0.2 Cv

## DL-56 Series

### Dome-loaded Pressure Regulator

The DL-56 is a compact and robust design which employs a unique “Dual Piston” set up that enables the user to control pressure up to 6000 psig (414 bar) with as little as 40 psig (3 bar) of dome pressure. All of this is accomplished within the smallest envelope the industry has to offer.

The regulator portion of this unit was patterned after the time tested PR-56 Series, which is widely recognized as a benchmark of performance and quality. Offering the utmost in economy and safety, this unit is constructed from brass alloy 360. A carefully engineered all 316L stainless steel piston sensor unit offers good sensitivity and repeatability. An independent test was run and showed that the unit’s ability to repeat to a set point and low operating hysteresis is unsurpassed through out the industry.

Completing this design is the addition of a 316 stainless steel dome unit. The inlet ring to the dome is freely rotating and captured by a high tensile snap ring. This feature allows easy positioning and alignment of the dome gas line within a customer’s system while maintaining excellent leak integrity.



pressure regulators

### Typical Applications

- Pilot plant
- Off-shore oil and gas rigs
- Pneumatic test benches
- Component testing
- R & D systems
- High pressure booster systems

### Features & Benefits

- Gas or liquid service
- Better than 25 Ra finish in diaphragm cavity
- Stainless steel piston sensor
- 20 micron inlet filter
- Bubble-tight shutoff
- Remote dome-loading

### Technical Data

|                           |  |
|---------------------------|--|
| <b>CONSTRUCTION</b>       | Brass (alloy 360)  |
| <b>DOMES RATIOS</b>       | 11 : 1, 20 : 1, 43 : 1, 56 : 1, 76 : 1, 108 : 1, 122 : 1 and 172 : 1 |
| <b>INLET/OUTLET PORTS</b> | ¼" FNPT (standard)   |
| <b>OUTLET PRESSURES</b>   | up to 6000 psig (414 bar)  |
| <b>Cv COEFFICIENTS</b>    | 0.05, 0.20   |

# DL-56 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold.

**DL56 - 2 A 1 1 A 2 0 1 6 3 A**

**BODY MATERIAL**

**2 Brass**

**PORT CONFIGURATIONS**

**A Standard**

For more port configurations, see page 9.

**PROCESS PORT TYPES**

(GAUGE PORT TYPE, IF SPECIFIED)

**1 1/4" FNPT (1/4" FNPT gauge ports)**

**4 3/8" FNPT (1/4" FNPT gauge ports)**

**SURFACE FINISH OF DIAPHRAGM CAVITY**

**1 < 25 Ra**

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

**SEAT MATERIAL**

**A Tefzel®**

**H PCTFE**

**Q PEEK™**

**OPTIONS**

**A EB33 (oxygen cleaning)**

**B EB5 cleaning**

**D Helium leak test**

**E Pressure test certificate**

**F Certificate of Conformity**

**G CMTR**

**DOME STYLE**

**3 Stainless steel, standard**

**4 Captured vent, stainless steel**

**PISTON MATERIAL**

**1 Stainless steel**

**PISTON TYPE**

**1 Non-self-relieving, Viton® cavity O-ring**

**2 Non-self-relieving, PTFE cavity O-ring**

**3 Self-relieving, Viton® cavity O-ring**

**4 Self-relieving, PTFE cavity O-ring**

**DOME RATIO**

**0 11 : 1**

**1 43 : 1**

**2 56 : 1**

**3 76 : 1**

**4 108 : 1**

**5 122 : 1**

**6 172 : 1**

**7 20 : 1**

**FLOW COEFFICIENT (Cv)**

**2 0.05**

**5 0.2**

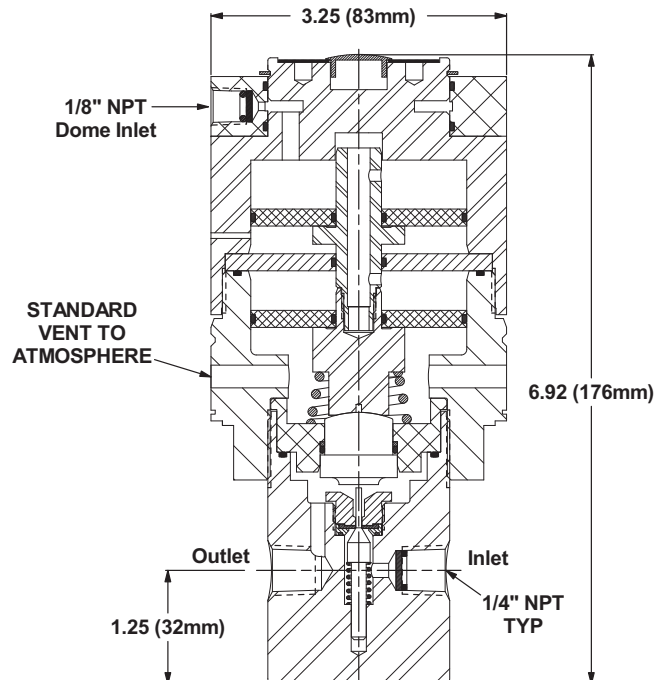
NOTE: Contact the factory for any additional requirements.

## Maximum Temperature & Operating Inlet Pressures

| SEAT MATERIAL | MAXIMUM TEMPERATURE | @ | MAXIMUM OPERATING INLET PRESSURE |
|---------------|---------------------|---|----------------------------------|
| Tefzel®       | 150° F (66° C)      | @ | 3600 psig (248 bar)              |
| PCTFE         | 175° F (80° C)      | @ | 6000 psig (414 bar)              |
| PEEK™         | 175° F (80° C)      | @ | 6000 psig (414 bar)              |

## Outline and Mounting Dimensions

Weight = 5.4 lbs (2.45kg)



20:1 RATIO, NON S/R, 0.05 Cv

Tefzel® is a registered trademark of the DuPont Company.  
 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.

## DL-57 Series

### Dome-loaded Pressure Regulator

The DL-57 is a compact and robust design which employs a unique “Dual Piston” set up that enables the user to control pressure up to 10,000 psig (689 bar) with as little as 58 psig(4 bar) of dome pressure. All of this is accomplished within the smallest envelope the industry has to offer.

The regulator portion of this unit was patterned after the time tested PR-57 Series, which is widely recognized as a benchmark of performance and quality. Offering the utmost in safety and corrosion prevention, this unit is constructed from 316L stainless steel. A carefully engineered piston sensor unit offers good sensitivity and repeatability. An independent test was run and showed that the unit’s ability to repeat to a set point and low operating hysteresis is unsurpassed through out the industry.

Completing this design is the addition of a 316 stainless steel dome unit. The inlet ring to the dome is freely rotating and captured by a high tensile snap ring. This feature allows easy positioning and alignment of the dome gas line within a customer’s system while maintaining excellent leak integrity.



pressure regulators

### Typical Applications

- Pilot plant
- Off-shore oil and gas rigs
- Pneumatic test benches
- Component testing
- R & D systems
- High pressure booster systems

### Features & Specifications

- Gas or liquid service
- Better than 25 Ra finish in diaphragm cavity
- Stainless steel piston sensor
- 20 micron inlet filter
- Bubble-tight shutoff
- Remote dome-loading

### Technical Data

|                           |  |
|---------------------------|--|
| <b>CONSTRUCTION</b>       | 316L stainless steel construction<br>(MONEL® optional)   |
| <b>DOMES RATIOS</b>       | 11:1, 20:1, 43:1, 56:1, 76:1,<br>108:1, 122:1, and 172:1 |
| <b>INLET/OUTLET PORTS</b> | ¼" FNPT (standard)                                       |
| <b>OUTLET PRESSURES</b>   | up to 10,000 psig (689 bar)                              |
| <b>Cv COEFFICIENTS</b>    | 0.05, 0.20   |



# DL-57 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

**DL57 – 1 A 1 1 Q 2 3 1 1 3 A**

**BODY MATERIAL**

- 1 316 stainless steel
- 2 MONEL®

**PORT CONFIGURATIONS**

- 1 Standard

For more port configurations, see page 9.

**PROCESS PORT TYPES (GAUGE PORT TYPE, IF SPECIFIED)**

- 1 ¼" FNPT (¼" FNPT gauge ports)
- 4 ⅜" FNPT (¼" FNPT gauge ports)

**SURFACE FINISH OF DIAPHRAGM CAVITY**

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

**SEAT MATERIAL**

- C Polyimide
- Q PEEK™

**OPTIONS**

- B EB5 cleaning
- D Helium leak test
- E Pressure test certificate
- F Certificate of Conformity
- G CMTR

**DOMESTYLE**

- 3 Stainless steel, standard
- 4 Captured vent, stainless steel

**PISTON MATERIAL**

- 1 Stainless steel
- 4 MONEL®

**PISTON TYPE**

- 1 Non-self-relieving, Viton® cavity O-ring
- 2 Non-self-relieving, PTFE cavity O-ring
- 3 Self-relieving, Viton® cavity O-ring
- 4 Self-relieving, PTFE cavity O-ring

**DOMERATIO**

- 0 11:1
- 1 43:1
- 2 56:1
- 3 76:1
- 4 108:1
- 5 122:1
- 6 172:1
- 7 20:1

**FLOW COEFFICIENT (Cv)**

- 2 0.05
- 5 0.2

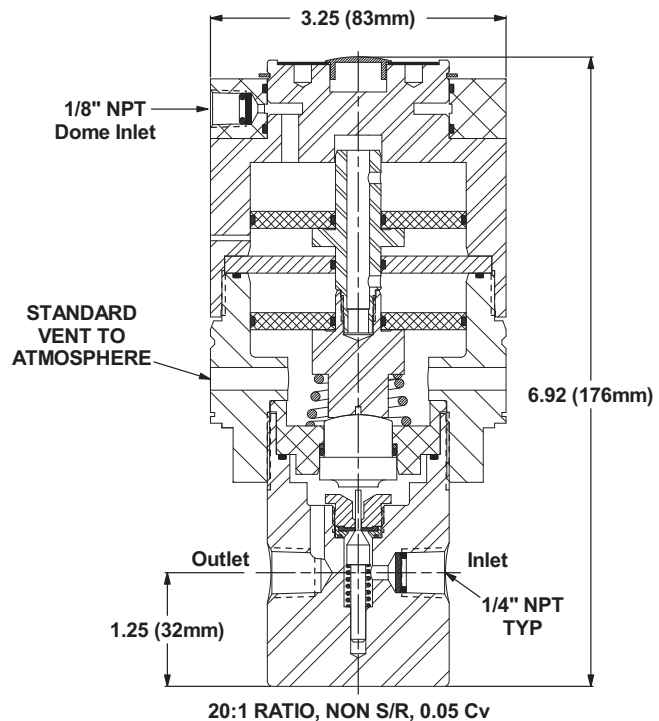
NOTE: Contact the factory for any additional requirements.

## Maximum Temperature & Operating Inlet Pressures

| SEAT MATERIAL | MAXIMUM TEMPERATURE | @ | MAXIMUM OPERATING INLET PRESSURE |
|---------------|---------------------|---|----------------------------------|
| Polyimide     | 150° F (66° C)      | @ | 10,000 psig (689 bar)            |
| PEEK™         | 150° F (66° C)      | @ | 10,000 psig (689 bar)            |

## Outline and Mounting Dimensions

Weight = 5.4 lbs (2.45kg)



MONEL® is a registered trademark of Special Metals Corporation.  
 PEEK™ is a trademark of Victrex PLC.  
 Viton® is a registered trademark of DuPont Dow Elastomers.

## DL-59 Series

### Dome-loaded Pressure Regulator

Responding to the needs of the industry for a simple, safe and effective way to remotely load high pressure regulators, GO Regulator designed and developed a line of low profile dome loading units.

This compact and robust design employs a unique “Dual Piston” set up which enables the user to control pressure up to 4000 psig (276 bar) with as little as 36 psig (2 bar) of dome pressure. All of this is accomplished within the smallest envelope the industry has to offer!

The regulator portion of this unit was patterned after the time tested PR-59 Series, which is widely recognized as a benchmark of performance and quality. Offering the utmost in safety and corrosion prevention, this unit is constructed from 316L stainless steel. A carefully engineered piston sensor unit offers good sensitivity and repeatability. This is coupled with the large Cv of the PR-59 of 1.20.

Completing this design is the addition of a 316 stainless steel dome unit. The inlet ring to the dome is freely rotating and captured by a high tensile snap ring. This feature allows easy positioning and alignment of the dome gas line within a customer’s system while maintaining excellent leak integrity.



pressure regulators

### Typical Applications

- Pilot plant
- Pneumatic high flow test benches
- Bulk gas delivery
- R & D systems

### Technical Data

|                         |  |
|-------------------------|--|
| <b>CONSTRUCTION</b>     | 316L stainless steel construction<br>(Brass and MONEL® optional) |
| <b>DOMES RATIOS</b>     | 11:1, 20:1, 43:1, 56:1, 76:1,<br>108:1, 122:1, and 172:1         |
| <b>OUTLET PRESSURES</b> | up to 4000 psig (276 bar)  |
| <b>Cv COEFFICIENTS</b>  | 1.2 (standard)   |

### Features & Benefits

- Gas or liquid service
- Better than 25 Ra finish in diaphragm cavity
- Stainless steel piston sensor
- 20 micron inlet filter
- Bubble-tight shutoff

# DL-59 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold.

**DL59 – 1 A A 1 H 9 0 1 5 3 A**

**BODY MATERIAL**

- 1 **316L stainless steel**
- 2 Brass
- 4 MONEL®

**PORT CONFIGURATIONS**

- A Standard**  
For more port configurations, see page 9.

**PROCESS PORT TYPES**

(GAUGE PORT TYPE, IF SPECIFIED)

- 5 1/2" FNPT (1/4" FNPT gauge ports)
- A 3/4" FNPT (1/4" FNPT gauge ports)**

**SURFACE FINISH OF DIAPHRAGM CAVITY**

- 1 **< 25 Ra**

**SEAT MATERIAL**

- H PCTFE**
- I PTFE

**OPTIONS**

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

**DOME STYLE**

- 3 Stainless steel, standard**
- 4 Captured vent, stainless steel

**PISTON MATERIAL**

- 5 Stainless steel**
- B** MONEL®

**PISTON TYPE**

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

**DOME RATIO**

- 0** 11:1
- 1 43:1
- 2 56:1
- 3 76:1
- 4 108:1
- 5 122:1
- 6 172:1
- 7 20:1

**FLOW COEFFICIENT (Cv)**

- 9** 1.2

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

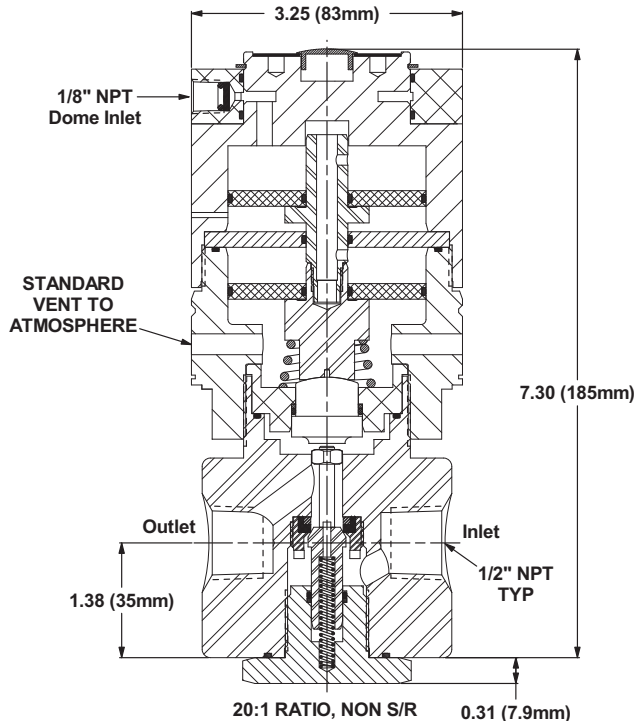
*NOTE: Contact the factory for any additional requirements.*

## Maximum Temperature & Operating Inlet Pressures

| SEAT MATERIAL | MAXIMUM TEMPERATURE | @ | MAXIMUM OPERATING INLET PRESSURE |
|---------------|---------------------|---|----------------------------------|
| PCTFE         | 175° F (80° C)      | @ | 4000 psig (276 bar)              |
| PTFE          | 150° F (66° C)      | @ | 1000 psig (69 bar)               |

## Outline and Mounting Dimensions

Weight = 8.4 lbs (3.8kg)

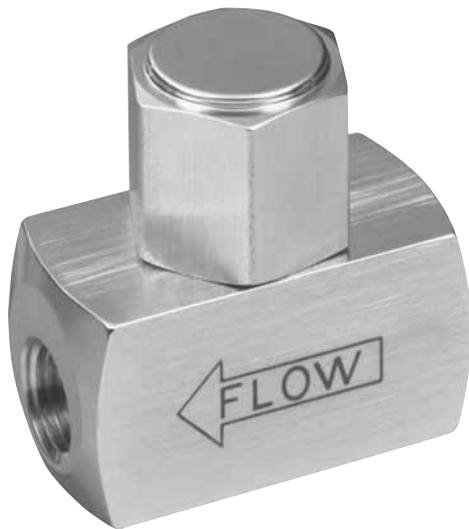


MONEL® is a registered trademark of Special Metals Corporation.  
 Kel-F® is a registered trademark of 3M Company.

## Filters

### Index

|                         |                    |
|-------------------------|--------------------|
| Safety Warning          | Inside Front Cover |
| F-4 Series Line Filter  | 1                  |
| F-6K Series Line Filter | 3                  |
| Disclaimers             | Inside Back Cover  |



filters

## **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. When selecting products, the total system design must be considered to ensure safe, trouble-free performance. 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.

Contact your authorized GO Regulator sales and service representative for information about additional sizes and special alloys.

## **SAFETY WARNING:**

---

GO Regulator products are designed for installation only by professional suitably qualified licensed system installers experienced in the applications and environments for which the products are intended. These products are intended for integration into a system. Where these products are to be used with flammable or hazardous media, precautions must be taken by the system designer and installer to ensure the safety of persons and property. Flammable or hazardous media pose risks associated with fire or explosion, as well as burning, poisoning or other injury or death to persons and/or destruction of property. The system designer and installer must provide for the capture and control of such substances from any vents in the product(s). The system installer must not permit any leakage or uncontrolled escape of hazardous or flammable substances. The system operator must be trained to follow appropriate precautions and must inspect and maintain the system and its components including the product(s) and at regular intervals in accordance with timescales recommended by the supplier to prevent unacceptable wear or failure.

## F-4 Series In-line Filter



This filter is designed to be used as a standard in-line filter or it may easily be threaded into a pressure regulator or valve body for inlet protection. If desired, we will install this filter for you into any of our standard pressure control products prior to shipment.

For your special requirements, this filter can be custom manufactured from almost any machinable alloy. Let us know your requirement.

### Features & Specifications

- Compact size
- Economical design
- Easily changed filter elements
- Stainless steel body (316 series) with PTFE seals
- Nominal micron ( $\mu$ ) ratings of filtration available:
  - 10 $\mu$  sintered 316 stainless steel
  - 20 $\mu$  sintered 316 stainless steel
  - 50 $\mu$  sintered 316 stainless steel
  - 70 $\mu$  sintered 316 stainless steel
  - 100 $\mu$  316 stainless steel mesh
  - 200 $\mu$  316 stainless steel mesh
  - 300 $\mu$  316 stainless steel mesh
- Pressures up to 6,000 psig (41.37 MPa)

filters

# F-4 Series In-line Filter

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Part No. **102120-10** Standard filter with 10 micron nominal filtration

If other than the standard 10 micron ( $\mu$ ) filtration is desired, specify by the use of a dash number. For example: **102120-20** for 20 micron sintered 316 stainless steel filtration or **102120-200** for 200 micron stainless steel mesh filtration.

## F4 102120 – 10

### FILTER STYLE

**102120** Stainless steel, 1/4" FNPT inlet, 1/4" MNPT outlet

### FILTER RATING

**10** 10 $\mu$  sintered 316 stainless steel  
**20** 20 $\mu$  sintered 316 stainless steel  
**50** 50 $\mu$  sintered 316 stainless steel  
**70** 70 $\mu$  sintered 316 stainless steel  
**100** 100 $\mu$  316 stainless steel mesh  
**200** 200 $\mu$  316 stainless steel mesh  
**300** 300 $\mu$  316 stainless steel mesh

**WARNING:** If regulators are used in flammable or toxic applications, national and/or local regulations may require the use of a captured vent.

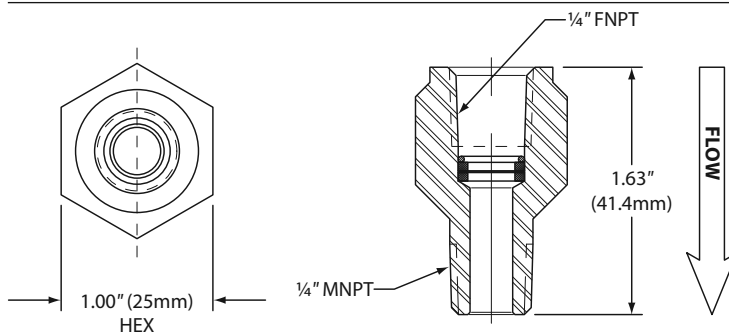
It is the responsibility of the customer to determine if a captured vent is applicable.

**NOTE:** Contact the factory for any additional requirements.

## Maximum Temperature & Operating Inlet Pressures

| Maximum Temperature | @ | Operating Inlet Pressure |
|---------------------|---|--------------------------|
| 450° F (232° C)     | @ | 6,000 psig (41.37 MPa)   |

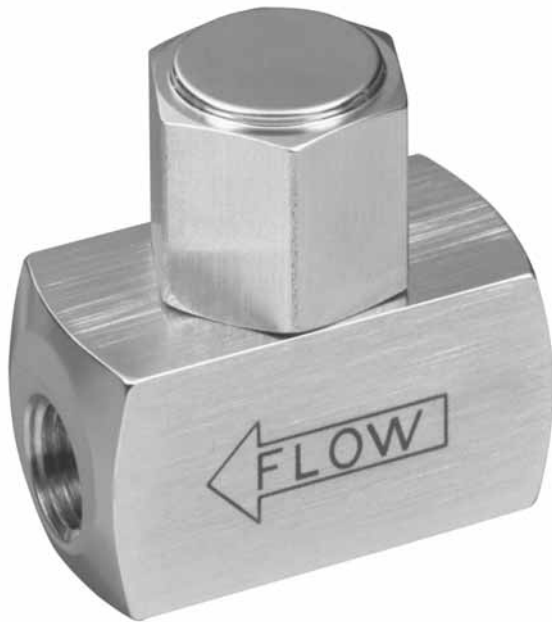
## Outline Dimensions



## Repair Kit Information

| Part Number        | Description                          |
|--------------------|--------------------------------------|
| <b>100089</b>      | Screen filter kit (specify porosity) |
| <b>G100089-10</b>  | 10 $\mu$ nominal filtration          |
| <b>G100089-20</b>  | 20 $\mu$ nominal filtration          |
| <b>G100089-50</b>  | 50 $\mu$ nominal filtration          |
| <b>G100089-70</b>  | 70 $\mu$ nominal filtration          |
| <b>G100089-100</b> | 100 $\mu$ nominal filtration         |
| <b>G100089-150</b> | 150 $\mu$ nominal filtration         |
| <b>G100089-200</b> | 200 $\mu$ nominal filtration         |
| <b>G100089-300</b> | 300 $\mu$ nominal filtration         |

## F-6K In-line or Bypass Filter



The F-6K in-line or bypass filter has been designed with bar stock construction to provide reliable and economical filtration of streams having pressures up to 6,000 psig (41.37 MPa) at 70° F (20° C).

Materials of construction (standard) are 316 stainless steel and PTFE for maximum service capability at economical prices. If a greater level of corrosion protection is required, this unit can be made (option) from MONEL® or HASTELLOY® C-276. The sintered 316 stainless steel filter element, with filtration ranges between 2 and 55 microns ( $\mu$ ), can be easily changed without removing the filter from the line. Standard connections are  $\frac{1}{4}$ " FNPT. The optional bypass port is standard as  $\frac{1}{8}$ " FNPT.

### Features & Specifications

- Nominal ratings of filtration available:
  - 2–5 $\mu$  sintered
  - 5–9 $\mu$  sintered
  - 10–15 $\mu$  sintered
  - 20–30 $\mu$  sintered
  - 40–55 $\mu$  sintered
  - 100 $\mu$  316 stainless steel mesh
  - 150 $\mu$  316 stainless steel mesh
- Available with optional bypass

filters



# F-6K In-line or Bypass Filter

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://www.goreg.com/distributor/index.htm)

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

### F6K 101700 - 3 | 1

#### FILTER STYLE & MATERIAL

- 101700** In-line, stainless steel, 1/4" FNPT connections
- 101830** 1/8" NPT bypass, stainless steel, 1/4" FNPT connections
- 101850** 1/4" FNPT bypass, stainless steel, 1/4" FNPT connections
- 102980** In-line, MONEL®, 1/4" FNPT connections\*
- 102981** 1/8" FNPT, bypass, MONEL®, 1/4" FNPT connections\*
- 102982** 1/4" FNPT bypass, MONEL®, 1/4" FNPT connections\*
- 107476** In-line, stainless steel, 1/4" MNPT outlet, 1/4" FNPT inlet
- 107519** 1/8" bypass, stainless steel, 1/4" MNPT outlet, 1/4" FNPT inlet
- 107518** 1/4" bypass, stainless steel, 1/4" MNPT outlet, 1/4" FNPT inlet

\* MONEL® not available with mesh elements.

#### OPTIONS (NOT REQUIRED)

- A** EB33 (oxygen cleaning)
- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR

#### VOLUME

- 1** Standard
- 2** Low volume

#### O-RING MATERIAL

- I** PTFE
- D** Viton®

#### FILTER RATING

- 1** 2-5µ sintered
- 2** 5-9µ sintered
- 3** 10-15µ sintered
- 4** 20-30µ sintered
- 5** 40-55µ sintered
- 6** 100µ 316 stainless steel mesh
- 7** 150µ 316 stainless steel mesh

NOTE: Contact the factory for any additional requirements.

## Maximum Temperature & Operating Inlet Pressures

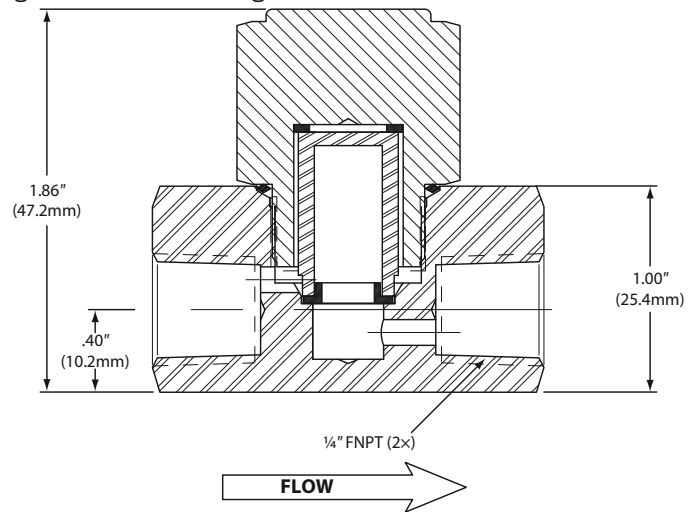
| Seal Material | Maximum Temperature | @ | Operating Inlet Pressure |
|---------------|---------------------|---|--------------------------|
| Viton®        | 70° F (20° C)       | @ | 6,000 psig (41.37 MPa)   |
|               | 175° F (80° C)      | @ | 3,600 psig (24.82 MPa)   |
| PTFE          | 70° F (20° C)       | @ | 6,000 psig (41.37 MPa)   |
|               | 150° F (66° C)      | @ | 3,600 psig (24.82 MPa)   |

**WARNING:** If regulators are used in flammable or toxic applications, national and/or local regulations may require the use of a captured vent.

It is the responsibility of the customer to determine if a captured vent is applicable.

## Outline Dimensions

Weight = 0.6 lbs (0.27kg)



## Repair Kit Information

### Stainless Steel

| Part Number | Description               |
|-------------|---------------------------|
| 101705      | In-line 2-5µ range        |
| 101706      | In-line 5-9µ range        |
| 101707      | In-line 10-15µ range      |
| 101708      | In-line 20-30µ range      |
| 101709      | In-line 40-50µ range      |
| 101855      | In-line 100µ mesh element |
| 101833      | Bypass 2-5µ range         |
| 101832      | Bypass 5-9µ range         |
| 101834      | Bypass 10-15µ range       |
| 101835      | Bypass 20-30µ range       |
| 101836      | Bypass 40-55µ range       |

### MONEL®

| Part Number | Description          |
|-------------|----------------------|
| 103861      | In-line 2-5µ range   |
| 103862      | In-line 5-9µ range   |
| 103863      | In-line 10-15µ range |
| 103864      | In-line 20-30µ range |
| 103865      | In-line 40-50µ range |
| 103866      | Bypass 2-5µ range    |
| 103867      | Bypass 5-9µ range    |
| 103868      | Bypass 10-15µ range  |
| 103869      | Bypass 20-30µ range  |
| 103870      | Bypass 40-55µ range  |

MONEL® is a registered trademark of Special Metals Corporation.  
 HASTELLOY® C-276 is a registered trademark of Haynes International, Inc.  
 Viton® is a registered trademark of DuPont Dow Elastomers

## Diaphragm Valves

### Index

|                           |                    |
|---------------------------|--------------------|
| Safety Warning            | Inside Front Cover |
| 2-way Diaphragm Valves    | 1                  |
| Pneumatic Actuated Valves | 4                  |
| DV1 Series-               |                    |
| How to Order Matrix       | 7                  |
| Disclaimers               | Inside Back Cover  |



diaphragm valves

## **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. When selecting products, the total system design must be considered to ensure safe, trouble-free performance. 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.

Contact your authorized GO Regulator sales and service representative for information about additional sizes and special alloys.

## **SAFETY WARNING:**

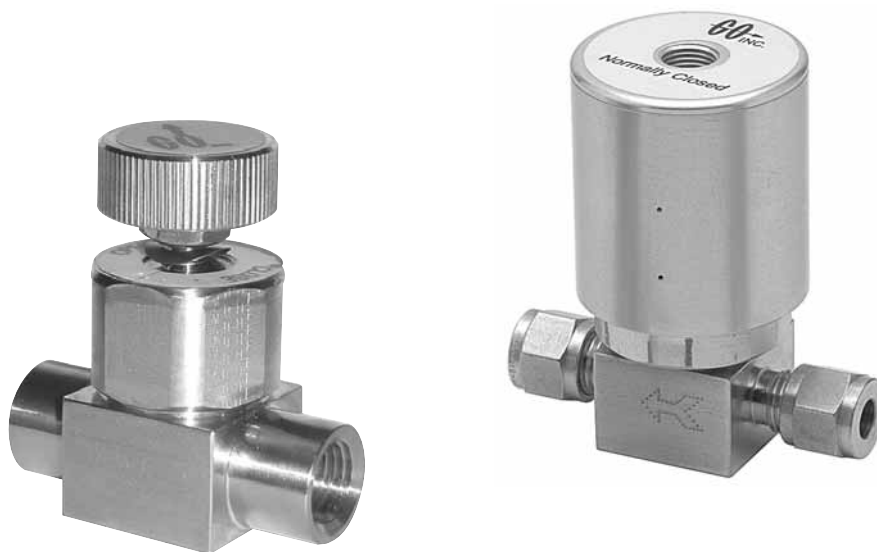
---

GO Regulator products are designed for installation only by professional suitably qualified licensed system installers experienced in the applications and environments for which the products are intended. These products are intended for integration into a system. Where these products are to be used with flammable or hazardous media, precautions must be taken by the system designer and installer to ensure the safety of persons and property. Flammable or hazardous media pose risks associated with fire or explosion, as well as burning, poisoning or other injury or death to persons and/or destruction of property. The system designer and installer must provide for the capture and control of such substances from any vents in the product(s). The system installer must not permit any leakage or uncontrolled escape of hazardous or flammable substances. The system operator must be trained to follow appropriate precautions and must inspect and maintain the system and its components including the product(s) and at regular intervals in accordance with timescales recommended by the supplier to prevent unacceptable wear or failure.

## DV1 Series

### 2-Way Diaphragm Valves

The DV1 Series Diaphragm Valves are totally free of springs, bellows, packing, o-rings and lubricants in the process wetted area. Metal-to-metal seals to atmosphere ensure that there is no transport of undesirable elements into the flow stream, and no escaping of process material into the atmosphere. Elgiloy® diaphragms ensure the utmost in corrosion resistance and extend overall valve life.



diaphragm valves

### Typical Applications

- Analytical Instrumentation
- Petrochemical
- Pharmaceutical
- Chemical

### Features & Benefits

- 2-way on/off control
- Metal-to-metal seals to atmosphere to prevent leakage
- Wide variety of materials for virtually all applications
- No dynamic O-rings, springs, or lubricant in wetted flow path to eliminate sample contamination
- Very low internal volume (0.16 cc)\*
- Manual ¼-plus turn or pneumatic actuation
- Pressures from vacuum (50 torr) to 3600 psig (248 bar)\*\*
- 40µ sintered stainless steel air inlet filter extends life of pneumatic actuator

\* Internal volume in machined passages of the valve body between mounting surface and sealing diaphragm(s).

\*\* Valves cleaned for oxygen service are limited to 3000 psig (207 bar).

# DV1 Series

## Manual 1/4-plus Turn Valves



### Technical Data

|                               |   |
|-------------------------------|---|
| <b>BODY</b>                   | 316L stainless steel, MONEL® and HASTELLOY® C-276 |
| <b>SEATS</b>                  | PCTFE and PEEK™                                   |
| <b>DIAPHRAGMS</b>             | Elgiloy®AMS 5876                                  |
| <b>ORIFICE SIZE</b>           | 0.110" (2.8 mm)                                   |
| <b>FLOW CAPACITY</b>          | 0.17 Cv   |
| <b>VALVE INTERNAL VOLUME*</b> | 0.16 cc   |
| <b>LEAKAGE</b>                | $1 \times 10^{-9}$ cc/sec helium (inboard)        |

\* Internal volume in machined passages of the valve body between mounting surface and sealing diaphragm(s).

### Operating Pressures

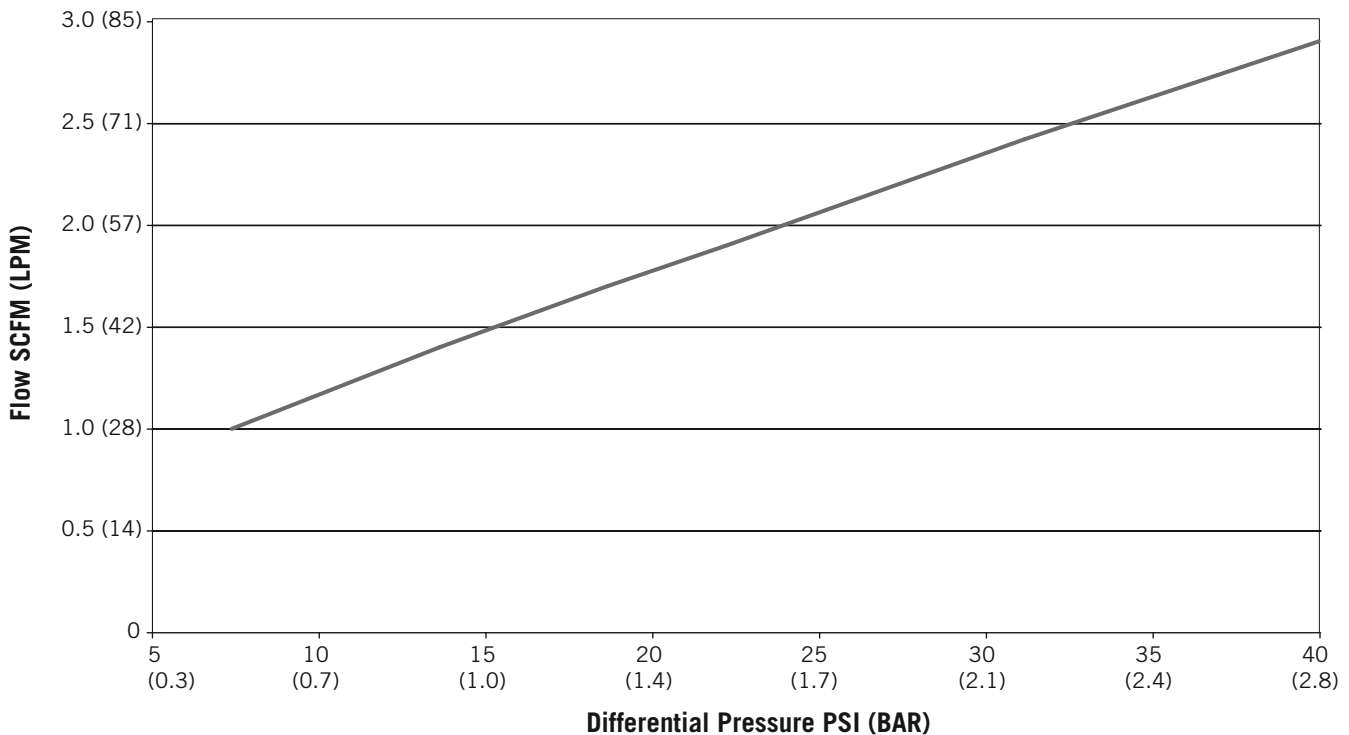
|                            |   |
|----------------------------|---|
| <b>OPERATING PRESSURE*</b> | Vacuum (50 torr) to 3600 psig (248 bar) |
| <b>PROOF PRESSURE</b>      | 7200 psig                               |
| <b>BURST PRESSURE</b>      | 14,400 psig (497 barg)                  |

\* Valves cleaned for oxygen service are limited to 3000 psig (207 bar).

### Operating Temperatures

| SEAT MATERIAL | 1/4-PLUS TURN TEMPERATURE             |
|---------------|---------------------------------------|
| PCTFE         | -40° F to +212° F (-40° C to +100° C) |
| PEEK™         | -40° F to +400° F (-40° C to +204° C) |

## Pressure vs. Flow Curve



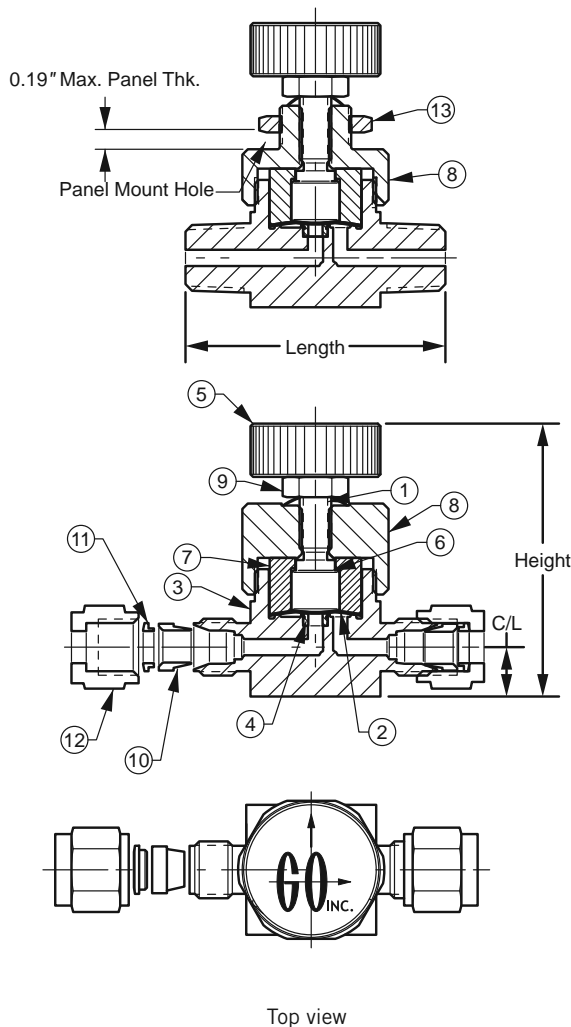
# DV1 Series

## Materials of Construction

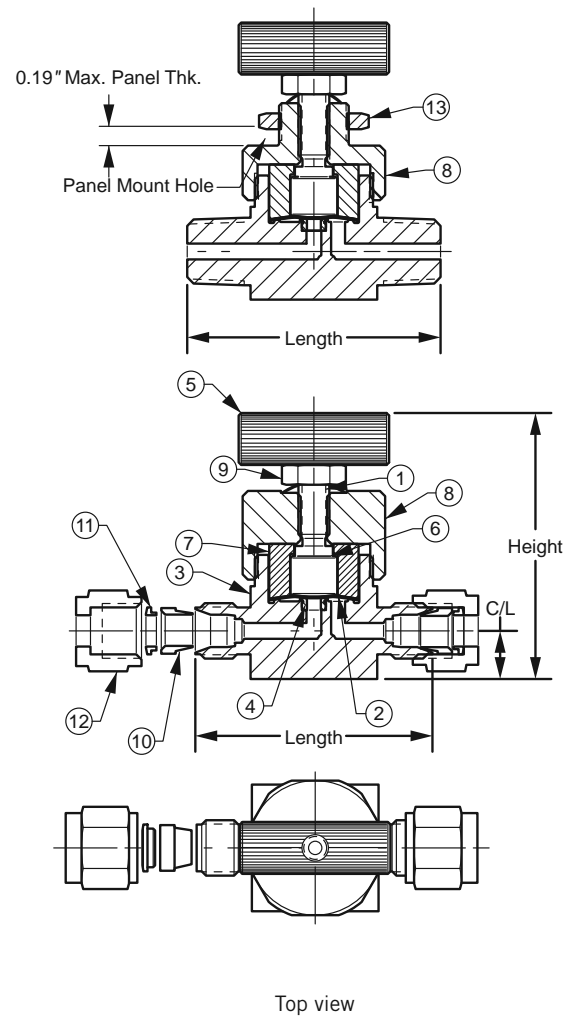
| #  | PART               | MATERIALS                                      |
|----|--------------------|--|
| 1  | Stem               | 17-4PH stainless steel, condition H900         |
| 2  | Diaphragm*         | Elgiloy®/AMS 5876                              |
| 3  | Body*              | 316L stainless steel, MONEL®, HASTELLOY® C-276 |
| 4  | Seat*              | PCTFE, PEEK™                                   |
| 5  | Handle             | 316 stainless steel                            |
| 6  | Thrust plug        | Brass  |
| 7  | Diaphragm retainer | 316 stainless steel                            |
| 8  | Bonnet             | 316L stainless steel, MONEL®, HASTELLOY® C-276 |
| 9  | Handle nut         | 18-8 stainless steel                           |
| 10 | Front ferrule*     | 316L stainless steel, MONEL®, HASTELLOY® C-276 |
| 11 | Rear ferrule       | 316L stainless steel, MONEL®, HASTELLOY® C-276 |
| 12 | Nut                | 316L stainless steel, MONEL®, HASTELLOY® C-276 |
| 13 | Panel-mount nut    | 316L stainless steel, MONEL®, HASTELLOY® C-276 |

\*Wetted components

### Manual ¼-plus turn Valves



### Optional T-handle Valves



## Dimensions

### Manual ¼-plus Turn Valves

| END CONNECTION  | LENGTH | HEIGHT  | HANDLE RADIUS | C/L CENTER LINE | PANEL MOUNT HOLE | PANEL MOUNT THICK |
|-----------------|--------|---------|---------------|-----------------|------------------|-------------------|
| ¼" MNPT         | 2.00"  | 2.44"   | 0.90"         | 0.38"           | 0.57"            | 0.19"             |
| ¼" FNPT         | 2.00"  | 2.44"   | 0.90"         | 0.38"           | 0.57"            | 0.19"             |
| ½" GYROLOK®     | 1.71"  | 2.44"   | 0.90"         | 0.38"           | 0.57"            | 0.19"             |
| ¼" NPT extended | 3.15"  | 2.44"   | 0.90"         | 0.38"           | 0.57"            | 0.19"             |
| 6mm GYROLOK®    | 47.5mm | 61.98mm | 22.86mm       | 9.65mm          | 14.48mm          | 4.83mm            |
| 8mm GYROLOK®    | 47.5mm | 61.98mm | 22.86mm       | 9.65mm          | 14.48mm          | 4.83mm            |

# DV1 Series

## Pneumatic Actuated Valves



### Technical Data

|                               |   |
|-------------------------------|---|
| <b>BODY</b>                   | 316L stainless steel, MONEL® and HASTELLOY® C-276 |
| <b>SEATS</b>                  | PCTFE, PEEK™                                      |
| <b>DIAPHRAGMS</b>             | Elgiloy®/AMS 5876                                 |
| <b>ORIFICE SIZE</b>           | 0.110" (2.8 mm)                                   |
| <b>FLOW CAPACITY</b>          | 0.17 Cv   |
| <b>VALVE INTERNAL VOLUME*</b> | 0.16 cc   |
| <b>LEAKAGE</b>                | 1 × 10 <sup>-9</sup> cc/sec helium (inboard)      |

\* Internal volume in machined passages of the valve body between mounting surface and sealing diaphragm(s).

### Operating Pressures Ratings

|                                | SMALL DIAMETER               | MEDIUM DIAMETER              | LARGE DIAMETER                |
|--------------------------------|------------------------------|------------------------------|-------------------------------|
| <b>VALVE WORKING PRESSURE*</b> | Vacuum (50 torr) to 500 psig | Vacuum (50 torr) to 800 psig | Vacuum (50 torr) to 3600 psig |
| <b>VALVE PROOF PRESSURE</b>    | 1000 psig                    | 1600 psig                    | 7200 psig                     |
| <b>VALVE BURST PRESSURE</b>    | 2000 psig                    | 3600 psig                    | 14,400 psig                   |

\* Valves cleaned for oxygen service are limited to 3000 psig (207 bar).

### Operating Temperatures

| SEAT MATERIAL | ¼-PLUS TURN TEMPERATURE                |
|---------------|--|
| PCTFE         | -40° F to +212° F (-40° C to +100° C)  |
| PEEK™         | -40° F to +400° F (-40° C to +204 ° C) |

## Air Actuation Pressure Requirements

psig nominal

| PRESSURE                           | SMALL DIAMETER                                     | MEDIUM DIAMETER                                    | LARGE DIAMETER                            |
|------------------------------------|--|--|---|
| Valve Operating Pressure           | Vacuum (50 torr) to 500 psig (Inlet)               | Vacuum (50 torr) to 800 psig (Inlet)               | Vacuum (50 torr) to 3600 psig (Inlet)     |
| Actuation Pressure Normally Closed | 40 psig (3 bar)<br>(0–250 psig process pressure)   | 40 psig (3 bar)<br>(0–250 psig process pressure)   | 50 psig<br>(0–3600 psig process pressure) |
| Actuation Pressure Normally Open   | 40 psig (3 bar)<br>(251–500 psig process pressure) | 40 psig (3 bar)<br>(501–800 psig process pressure) | 50 psig<br>(0–3600 psig process pressure) |

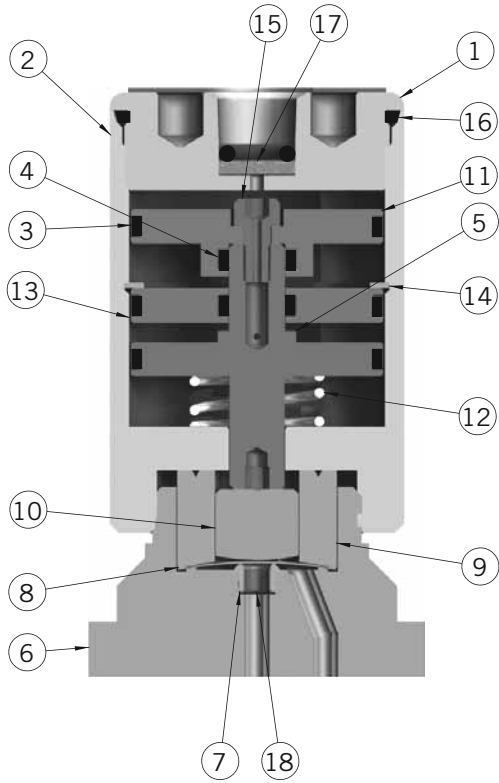
Note: Actuation/Pressure Curves available on the web at [www.goreg.com](http://www.goreg.com)

# DV1 Series

## Dimensions & Materials of Construction

Dimensions are in inches (millimeters) for reference only and are subject to change.

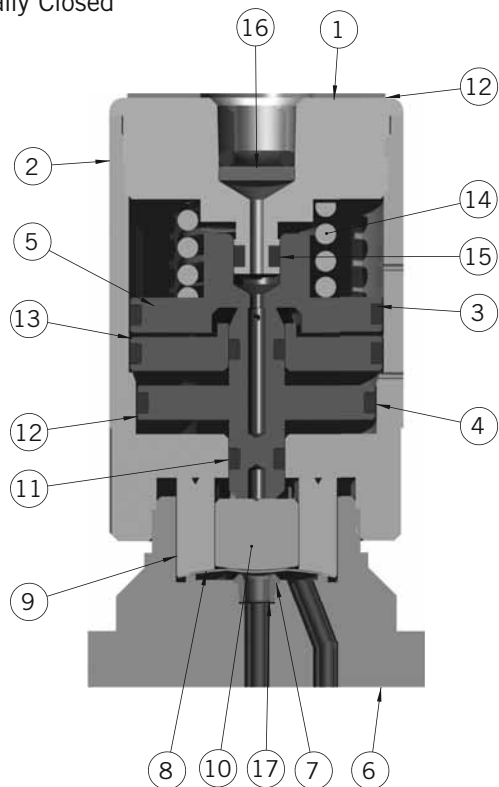
Normally Open



| #  | PART               | MATERIALS   |
|----|--------------------|---|
| 1  | Actuator cap       | Aluminum, 316L stainless steel, MONEL® & HASTELLOY® C-276 |
| 2  | Actuator           | Aluminum, 316L stainless steel                            |
| 3  | O-ring             | Viton®  |
| 4  | O-ring             | Viton®  |
| 5  | Piston             | Brass   |
| 6  | Body*              | 316L stainless steel, MONEL® & HASTELLOY® C-276           |
| 7  | Seat*              | PCTFE or PEEK®  |
| 8  | Diaphragm*         | Elgiloy®AMS 5876  |
| 9  | Diaphragm retainer | 316 stainless steel                                       |
| 10 | Thrust plug        | Brass   |
| 11 | Upper piston       | Brass   |
| 12 | Spring             | 302 stainless steel                                       |
| 13 | Chamber separator  | Brass   |
| 14 | Retaining ring     | 302 stainless steel                                       |
| 15 | Cap screw          | Alloy steel   |
| 16 | O-ring             | Viton®  |
| 17 | Sintered filter    | 316 stainless steel, 40µ                                  |

\* Wetted components

Normally Closed



| #  | PART               | MATERIALS   |
|----|--------------------|---|
| 1  | Actuator cap       | Aluminum, 316L stainless steel, MONEL® & HASTELLOY® C-276 |
| 2  | Actuator           | Aluminum, 316L stainless steel                            |
| 3  | O-rings            | Viton®  |
| 4  | O-rings            | Viton®  |
| 5  | Upper piston       | Brass   |
| 6  | Body*              | 316L stainless steel, MONEL® & HASTELLOY® C-276           |
| 7  | Seat*              | PCTFE (formerly Kel-F®) or PEEK™                          |
| 8  | Diaphragm*         | Elgiloy®AMS 5876  |
| 9  | Diaphragm retainer | 316 stainless steel                                       |
| 10 | Thrust plug        | Brass   |
| 11 | O-ring             | Viton®  |
| 12 | Lower piston       | Brass   |
| 13 | Chamber separator  | Brass   |
| 14 | Spring             | 302 stainless steel                                       |
| 15 | O-ring             | Viton®  |
| 16 | Sintered filter    | 316 stainless steel, 40µ                                  |

\* Wetted components



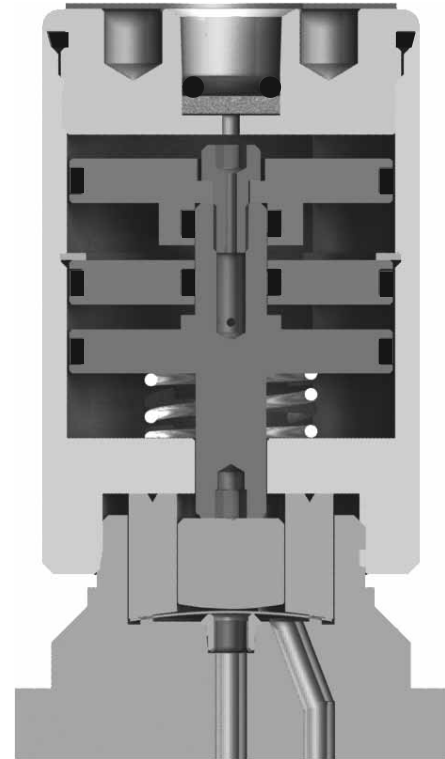
# DV1 Series

## Dimensions

### Pneumatic Small Diameter Actuator

| END CONNECTION  | LENGTH         | HEIGHT         | ACTUATOR DIAMETER | C/L CENTER LINE |
|-----------------|----------------|----------------|-------------------|-----------------|
| ¼" MNPT         | 2.00" (5.1 cm) | 2.75" (7.0 cm) | 1.31" (3.3 cm)    | 0.38" (1.0 cm)  |
| ¼" FNPT         | 2.00" (5.1 cm) | 2.75" (7.0 cm) | 1.31" (3.3 cm)    | 0.38" (1.0 cm)  |
| ½" GYROLOK®     | 1.71" (4.3 cm) | 2.75" (7.0 cm) | 1.31" (3.3 cm)    | 0.38" (1.0 cm)  |
| ¼" GYROLOK®     | 1.87" (4.8 cm) | 2.75" (7.0 cm) | 1.31" (3.3 cm)    | 0.38" (1.0 cm)  |
| ¼" NPT extended | 3.15" (8.0 cm) | 2.75" (7.0 cm) | 1.31" (3.3 cm)    | 0.38" (1.0 cm)  |
| 6mm GYROLOK®    | 47.5mm         | 69.85mm        | 33.27mm           | 9.65mm          |
| 8mm GYROLOK®    | 47.5mm         | 69.85mm        | 33.27mm           | 9.65mm          |

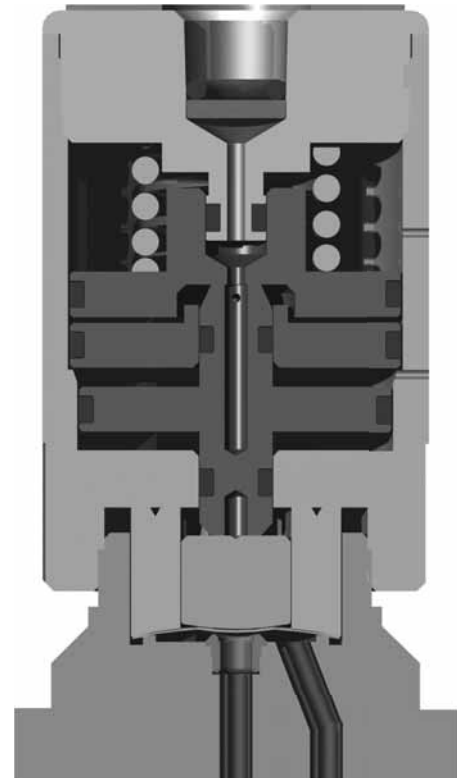
Normally Open



### Pneumatic Medium Diameter Actuator

| END CONNECTION  | LENGTH         | HEIGHT         | ACTUATOR DIAMETER | C/L CENTER LINE |
|-----------------|----------------|----------------|-------------------|-----------------|
| ¼" MNPT         | 2.00" (5.1 cm) | 2.75" (7.0 cm) | 1.56" (4.0 cm)    | 0.38" (1.0 cm)  |
| ¼" FNPT         | 2.00" (5.1 cm) | 2.75" (7.0 cm) | 1.56" (4.0 cm)    | 0.38" (1.0 cm)  |
| ½" GYROLOK®     | 1.71" (4.3 cm) | 2.75" (7.0 cm) | 1.56" (4.0 cm)    | 0.38" (1.0 cm)  |
| ¼" GYROLOK®     | 1.87" (4.8 cm) | 2.75" (7.0 cm) | 1.56" (4.0 cm)    | 0.38" (1.0 cm)  |
| ¼" NPT extended | 3.15" (8.0 cm) | 2.75" (7.0 cm) | 1.56" (4.0 cm)    | 0.38" (1.0 cm)  |
| 6mm GYROLOK®    | 47.5mm         | 69.85mm        | 39.62mm           | 9.65mm          |
| 8mm GYROLOK®    | 47.5mm         | 69.85mm        | 39.62mm           | 9.65mm          |

Normally Closed



### Pneumatic Large Diameter Actuator

| END CONNECTION  | LENGTH         | HEIGHT         | ACTUATOR DIAMETER | C/L CENTER LINE |
|-----------------|----------------|----------------|-------------------|-----------------|
| ¼" MNPT         | 2.00" (5.1 cm) | 3.25" (8.3 cm) | 2.36" (6.0 cm)    | 0.38" (1.0 cm)  |
| ¼" FNPT         | 2.00" (5.1 cm) | 3.25" (8.3 cm) | 2.36" (6.0 cm)    | 0.38" (1.0 cm)  |
| ½" GYROLOK®     | 1.71" (4.3 cm) | 3.25" (8.3 cm) | 2.36" (6.0 cm)    | 0.38" (1.0 cm)  |
| ¼" GYROLOK®     | 1.87" (4.8 cm) | 3.25" (8.3 cm) | 2.36" (6.0 cm)    | 0.38" (1.0 cm)  |
| ¼" NPT extended | 3.15" (8.0 cm) | 3.25" (8.3 cm) | 2.36" (6.0 cm)    | 0.38" (1.0 cm)  |
| 6mm GYROLOK®    | 47.5mm         | 82.55mm        | 59.94mm           | 9.65mm          |
| 8mm GYROLOK®    | 47.5mm         | 82.55mm        | 59.94mm           | 9.65mm          |

# DV1 Series

To Order, contact your local Distributor Link below:  
<http://www.goreg.com/distributor/index.htm>

Verify that your chosen part number is valid using the GO Wizards at  
[www.goreg.com/products/matrix/index.htm](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**DV1 - 1 C 2 5 C F4 F4 H O**

### BODY MATERIAL

- 1** 316L stainless steel
- 4** MONEL®
- 6** HASTELLOY® C-276

### ACTUATION METHOD

- C** Air actuated—normally closed
- M** Manual ¼-plus turn round handle
- O** Air actuated—normally open
- T** Manual ¼-plus turn T-handle

### ACTUATOR SIZE

- X** Manually operated
- 1** Air actuated—small (500 psig max.)
- 2** Air actuated—medium (800 psig max.)
- 3** Air actuated—large (3,600 psig max.)

### ACTUATOR MATERIAL

- X** Manually operated
- 1** 316L stainless steel
- 5** Aluminum

### MAXIMUM PROCESS PRESSURE

- A** 250 psig
- B** 500 psig
- C** 800 psig
- D** 3,600 psig
- E** 2,000 psig

### INLET CONNECTION TYPE\*

- C1** Male GYROLOK® 1/16"
- G1** GYROLOK® 1/16"
- G2** GYROLOK® 1/8"
- G4** GYROLOK® 1/4"
- T6** GYROLOK® 6mm
- T8** GYROLOK® 8mm
- F4** **Female NPT 1/4"**
- M4** Male NPT 1/4"
- B4** Female BSP/ISO 7/1 1/4"
- D4** Male BSP/ISO 7/1 1/4"
- X4** Extended, 1/4" male NPT
- SM** Surface mount (ANSI/ISA SP76 compliant)
- V4** 1/4" VCR®-compatible swivel female
- R4** 1/4" VCR®-compatible fixed male
- W4** 1/4" Tube stub
- S4** 1/4" Tube socket weld

### OPTION

- 0** None
- 1** Cleaned for oxygen service\*\*
- 4** Panel mount (manual valves only)
- 6** Panel mount & cleaned for oxygen service (manual valves only)\*\*

### SEAT MATERIAL

- H** PCTFE
- Q** PEEK™

### OUTLET CONNECTION TYPE\*

- C1** Male GYROLOK® 1/16"
- G1** GYROLOK® 1/16"
- G2** GYROLOK® 1/8"
- G4** GYROLOK® 1/4"
- T6** GYROLOK® 6mm
- T8** GYROLOK® 8mm
- F4** **Female NPT 1/4"**
- M4** Male NPT 1/4"
- B4** Female BSP/ISO 7/1 1/4"
- D4** Male BSP/ISO 7/1 1/4"
- X4** Extended, 1/4" male NPT
- SM** Surface mount (ANSI/ISA SP76 compliant)
- V4** 1/4" VCR®-compatible swivel female
- R4** 1/4" VCR®-compatible fixed male
- W4** 1/4" Tube stub
- S4** 1/4" Tube socket weld

\* Note with the exception of male NPT and female NPT, inlet and outlet connections must be of the same type.

\*\* Valves cleaned for oxygen service are limited to 3000 psig (207 bar). Body will be marked "cleaned for oxygen".

NOTE: Contact the factory for any additional requirements.

GYROLOK® is a registered trademark of HOKE®.  
 Viton® is a registered trademark of DuPont Dow Elastomers.  
 MONEL® is a registered trademark of Special Metals Corporation.  
 HASTELLOY® is a registered trademark of Haynes International, Inc.  
 Elgiloy® is a registered trademark of Elgiloy Specialty Metals.  
 PEEK™ is a trademark of Victrex PLC.

[www.hoke.com](http://www.hoke.com)  
[www.dupontelastomers.com](http://www.dupontelastomers.com)  
[www.specialmetals.com](http://www.specialmetals.com)  
[www.haynesintl.com](http://www.haynesintl.com)  
[www.elgiloy.com](http://www.elgiloy.com)  
[www.victrex.com](http://www.victrex.com)