

## 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

How to Order

Standard items in bold

**C2** – **1** **F** **1** **C** **1** **1** **1** **1** **1** **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** ¼" FNPT (¼" FNPT gauge ports)
- 4** ⅜" FNPT (¼" 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

**CGA Fitting**

**0 0 0**

**1 A 3 A 3 A**

**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** CF 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** CF 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

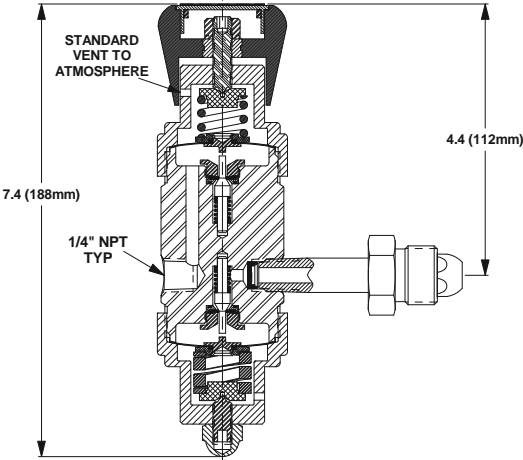
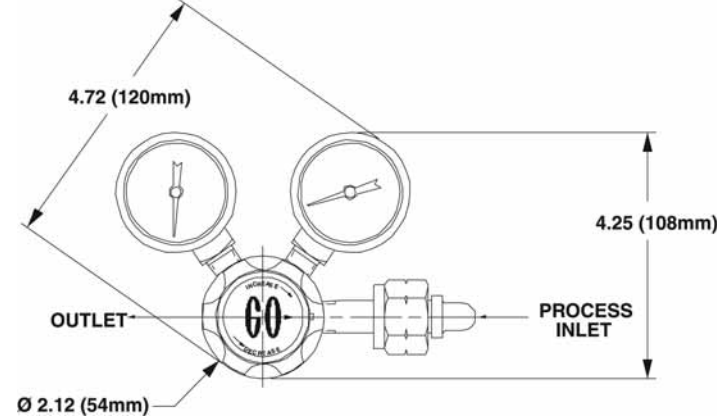
NOTE: Contact the factory for any additional requirements.

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)
CF 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.