GO REGULATOR, INC.

CV2 Series Cylinder Vaporizer

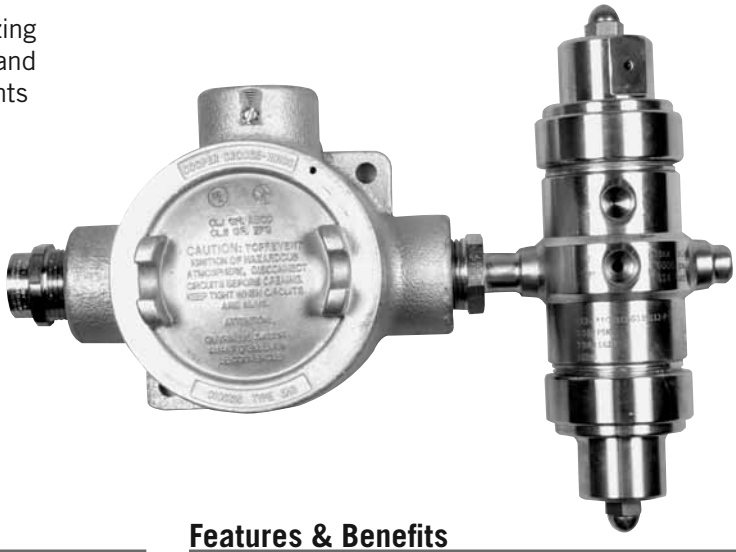
Electrically Heated Two-stage Pressure Regulators

Introduction

The Cylinder Vaporizer electrically heated pressure regulator is designed to supply heat to samples entering instrumentation systems. It can be used to preheat liquids, to prevent condensation of gases or to vaporize liquids prior to gas analysis.

The design of the CV2 Series consists of heat exchanger and pressure control sections. The pressure control sections are patterned after the time-proven design of the CYL-20 Two-Stage Pressure Reducing Regulator and provides the same excellent outlet pressure stability. The heat exchange element uses GO Regulator's unique spiral wrapped screen as the heat exchange surface. This screen has up to 100 square inches of heat transfer area and precise design forces all sample flow to pass through the element.

The Cylinder Vaporizer Series of vaporizing pressure reducing regulators are ATEX and CSA approved. The electrical components of this unit are securely housed in a Class A, B, C, D condulet assuring that there is always an adequate flame path between the environment and the controller. Safety considerations can be further enhanced by using the optional TCO (Thermal Cut Out) heater cartridge. This feature enables the unit to boast a T3 rating with up to 250 watts of power. (CSA T2D rating for 250W)



Typical Applications

Analytical process sample conditioning systems:

- Petrochemical refineries
- Chemical production facilities
- Pilot plants (chemical & petrochemical)
- LNG loading and off-loading points
- Natural gas pipeline sampling

Technical Data

CONSTRUCTION	316L stainless steel
OUTLET PRESSURES	0–10, 0–25, 0–50, 0–100, 0–250, and 0–500 psig
INLET PRESSURE	up to 6000 psig @ 380°F (193° C)
HEATING CAPACITY RANGES (IN WATTS)	40, 50, 100, 150, 200, and 250
C_V COEFFICIENTS	0.06, 0.025, 0.2
CERTIFICATIONS	CSA certification # LR-82566-5 ATEX Directive 2014/34/EU Certification # TRL03ATEX11001X

Features & Benefits

- HASTELLOY® C-276 and MONEL® optional
- Electropolished body with better than 25 Ra finish in diaphragm cavity for an optimal sealing surface
- Bubble-tight shutoff
- Unique spiral wrapped heat exchange element provides up to 100 square inches of heat transfer area.
- Available in 120VAC or 230VAC
- Optional TCO for T3 rating
- INCONEL® diaphragm standard

pressure regulators

CV2 Series Cylinder Vaporizer

To Order, contact your local Distributor Link below:
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

How to Order

Standard items in bold

1st Stage *2nd Stage*

CV2 – 4 A 1 H 3 1 H 3 E 1 3 2 1 2 1

BODY MATERIAL
- **1** 316L stainless steel, stainless steel diaphragm
- **4** MONEL®, INCONEL® diaphragm
- **6** HASTELLOY® C, INCONEL® diaphragm
- **C** **316L stainless steel, INCONEL® diaphragm**

PORT CONFIGURATION
- **A** **Standard Body "A" (One inlet Port and One Outlet Port) For more configurations, see pages 47-48.**

PROCESS PORT TYPE
- **0** ⅛" FNPT
- **1** ¼" FNPT

SEAT MATERIAL (1ST STAGE)
- **A** Tefzel®
- **B** CF PTFE
- **H** PCTFE
- **Q** PEEK™

FLOW COEFFICIENT (CV) (1ST STAGE)
- **C** **0.025**
- **3** **0.06**
- **5** **0.2**

CAP ASSEMBLY (1ST STAGE)
- **1** **Tamper-proof, stainless steel**
- **4** Tamper-proof, panel mount, stainless steel
- **7** Tamper-proof, captured vent, stainless steel

SEAT MATERIAL (2ND STAGE)
- **A** Tefzel®
- **B** CF PTFE
- **H** PCTFE
- **Q** PEEK™

FLOW COEFFICIENT (CV) (2ND STAGE)
- **C** **0.025**
- **3** **0.06**
- **5** **0.2**

OUTPUT RANGE (2ND STAGE)
- **C** 0–10 psig
- **D** 0–25 psig
- **E** 0–50 psig
- **G** 0–100 psig
- **I** 0–250 psig
- **J** 0–500 psig

CAP ASSEMBLY (2ND STAGE)
- **1** **Tamper-proof, stainless steel**
- **4** Tamper-proof, panel mount, stainless steel
- **7** Tamper-proof, captured vent, stainless steel

TEMPERATURE RANGE
- **1** 55°-85°F (13-29°C)
- **2** 75°-175°F (24-80°C)
- **3** 130°-300°F (54-149°C)
- **4** 260°-380°F (126-194°C)
- **6** No electronics

HEATER WATTAGE
- **1** 40W
- **2** 50W
- **3** 100W
- **4** 150W
- **6** No electronics
- **8** 200W
- **9** 250W

CONTROLLER TYPE
- **1** **Standard**
- **2** **Standard**
- **6** No electronics

THERMISTOR TYPE
- **1** Thermally protected (TCO)
- **2** **Non-thermally protected**
- **6** No electronics

VOLTAGE
- **1** 120 VAC
- **2** 230 VAC
- **6** No electronics

OPTIONS
- **B** EB-5 cleaning
- **D** Helium Leak Test
- **E** Pressure Test Certificate
- **F** Certificate of Conformity
- **G** CMTR

NOTE: 1. Contact the factory for any additional requirements.
2. Units that will be used for flammable liquid or gas with fire point at 200°C or below require the TCO Thermistor. It is also recommended to use the 1-PC body option. In addition, Tefzel and PCTFE seats in these units are recommended to use the captured vent cap option which provides for venting to a safe location.

Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel® & CF PTFE	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE	Up to 175° F (80° C)	@	6000 psig (41.37 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PEEK™	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

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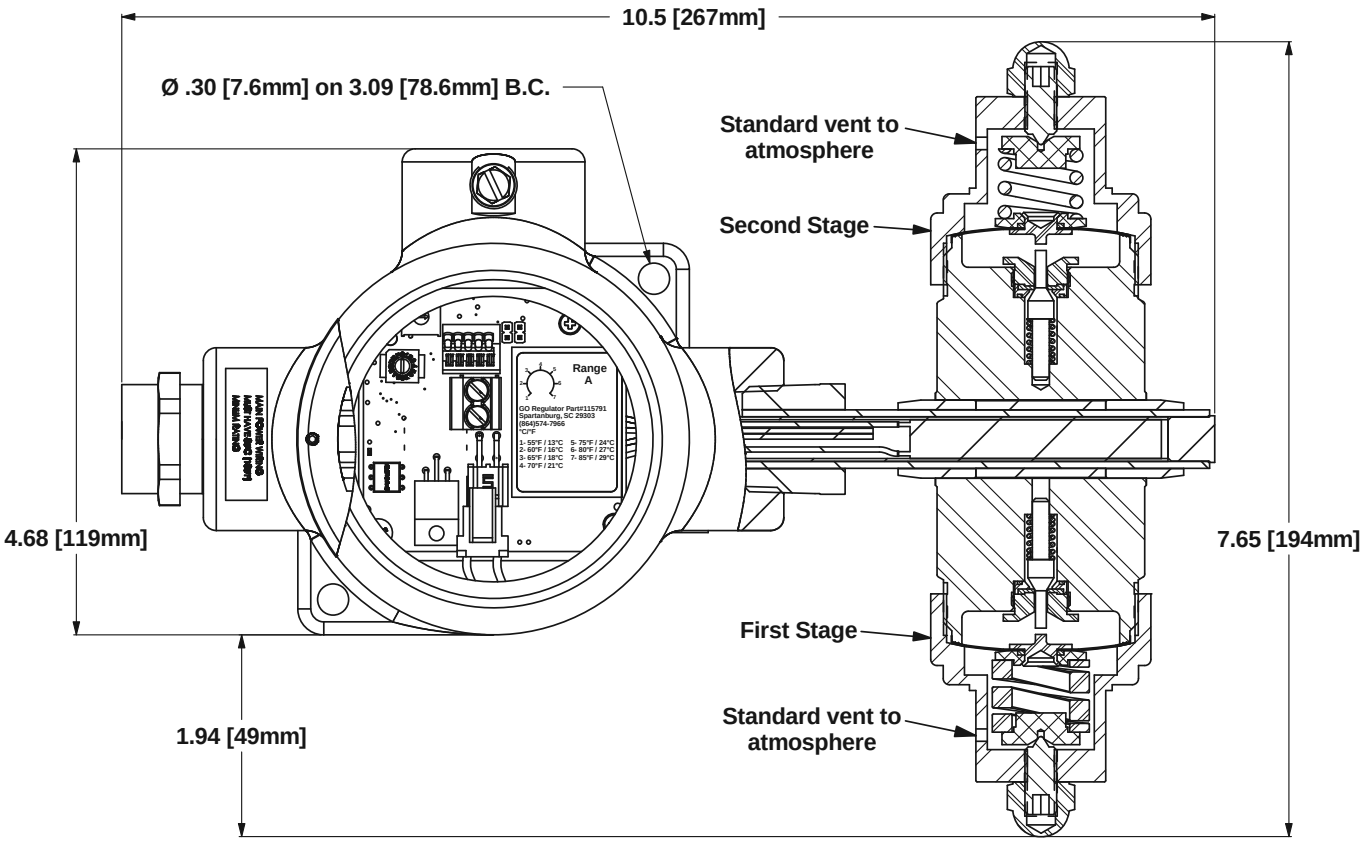
Outline and Mounting Dimensions



Panel mount option requires 1.390" (35.3mm) minimum diameter panel cut out

Weight = 9.3 lbs (4.2 kg)