

HPR-2 Series

Electrically Heated Regulators

Introduction

The HPR-2 Series 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 modular design of the HPR-2 consists of heat exchanger and pressure control sections.

The pressure control section is patterned after the time proven design of the PR-1 pressure reducing regulator and provides the same excellent outlet pressure stability. The heat exchanger section is made up of a body and heat exchange element. 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 HPR-2 Series of vaporizing pressure reducing regulators are both CSA and ATEX approved. The electrical components of this unit are securely housed in a Class A, B, C, D conduit 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 (250w is rated T2C for CSA).



pressure regulators

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, 0-500, 0-750 and 0-1000 psig
INLET PRESSURE	up to 6000 psig at 380° F (193° C)
HEATING CAPACITY RANGES (IN WATTS)	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

- Optional HASTELLOY® C and MONEL®
- Electropolished body with better than 25 Ra finish in diaphragm cavity for an optimal sealing surface
- Bubble-tight shutoff
- Modular pressure control and heat exchanger assemblies for easy maintenance
- Unique spiral wrapped heat exchange element provides up to 100 square inches of heat transfer area.
- Available in 120VAC or 230VAC
- Optional TCO heating cartridge
- INCONEL® diaphragm standard

HPR-2 Series

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

H2 - 4 Z 3 3 H 3 G 4 1 4 7

BODY MATERIAL

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

PORT CONFIGURATION

- Z One inlet port, one outlet port**
- For more configurations, see pages 38-45

TEMPERATURE RANGE / HEATING TYPE

- 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)
- 8 No electronics

HEATER WATTAGE

- 1 40W
- 2 50W
- 3 100W
- 4 150W
- 8 200W**
- 9 250W (T2C/230°C for CSA)
- 6 No electronics

SEAT MATERIAL

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

FLOW COEFFICIENT (Cv)

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

OPTIONS (NOT REQUIRED)

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

OPTIONS

- 1** TCO thermistor
- 5** 6000 psig inlet w/TCO thermistor (1-pc assy.)
- 7** 6000 psig inlet w/standard thermistor (1-pc assy.)
- 0** Other options

CAP ASSEMBLY

- 1 Tamper-proof, standard, stainless steel**
- 4** Tamper-proof, panel mount, stainless steel
- 7** Tamper-proof, captured vent, stainless steel
- J** Tamper-proof, captured vent, panel mount, stainless steel
- L** BP-6 topworks

HEATER BLOCK PORTING

- 1 Standard block**
 - 2** Extra outlet block
- For more blocks, see pages 36-37

HEATER BLOCK TYPE

- 3 120 VAC**
- 4 230 VAC**
- 5** No electronics

OUTLET RANGE

- C** 0-10 psig
- D** 0-25 psig
- E** 0-50 psig
- G** 0-100 psig
- I** 0-250 psig
- J** 0-500 psig
- W** 0-750 psig
- K** 0-1000 psig (BP-6 topworks)

*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

HPR-2 Electric 2-piece Assembly

(Heater block and regulator body separate)

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
CF PTFE & PCTFE	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)	@	3600 psig (24.82 MPa)

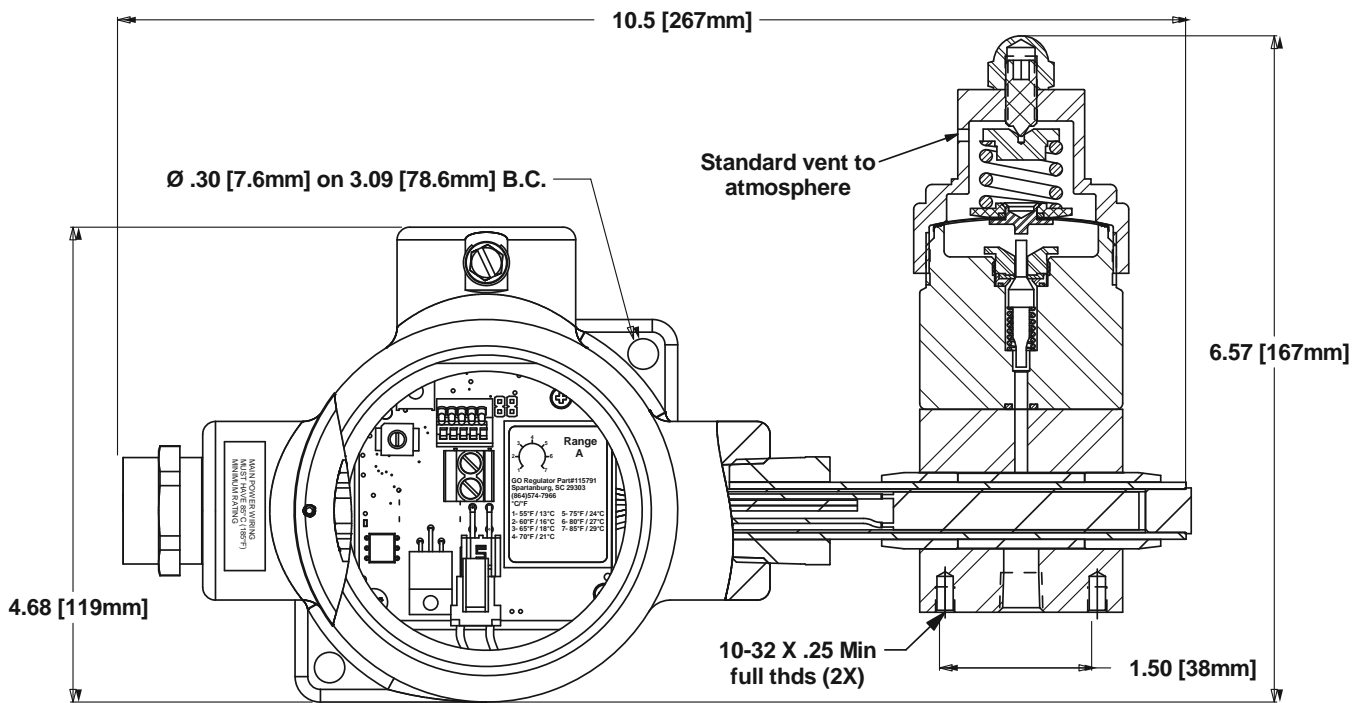
HPR-2 Electric 1-piece Assembly

(Integral heater block and regulator)

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)

HPR-2 Series

Outline & Mounting Dimensions



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

Weight 8.7 lbs (3.95 kg)

