

## HPR-2 Series

Electrically Heated Regulators

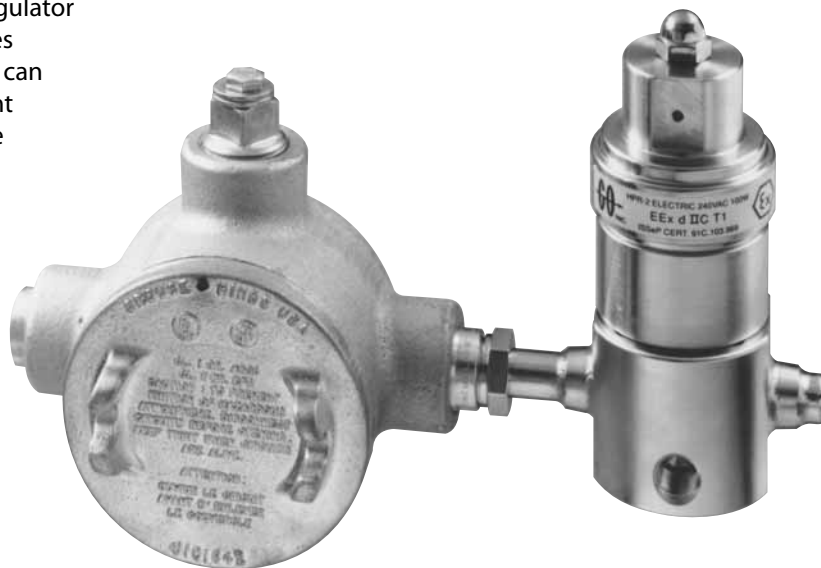
### Introduction

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 and proportional controller. These features enable the unit to boast a T3 rating with 150 watts of power.



### 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 at 380° F (193° C)
HEATING CAPACITY RANGES (IN WATTS)	40, 50, 100, and 150
C <sub>v</sub> COEFFICIENTS	0.06, 0.025, 0.2
CERTIFICATIONS	CSA certification # LR-82566-5 ATEX Directive 94/9/EC 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 240VAC
- Optional TCO heating cartridge and proportional controller

### GO Regulator

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pressure regulators

# HPR-2 Series

## 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
- 4** Monel®

### PORT CONFIGURATION

- Z** One inlet port, one outlet port
- For more configurations, see page 32

### TEMP. RANGE/HEATING TYPE

- 1** 55° F–85° F
- 2** 75° F–175° F
- 3** 130° F–300° F
- 4** 260° F–380° F

### HEATER WATTAGE

- 1** 40W
- 2** 50W
- 3** **100W**
- 4** 150W

### SEAT MATERIAL

- A** Tefzel®
- B** CF PTFE
- C** Polyimide
- H** PCTFE (formerly Kel-F®)
- Q** PEEK™

### FLOW COEFFICIENT (Cv)

- 3** **0.06**

### OPTIONS

- 1** TCO thermistor
- 5** 6000 psig inlet w/TCO thermistor (1-pc assy.)
- 7** 6000 psig inlet w/standard thermistor (1-pc assy.)
- B** TCO thermistor w/PTFE/Inconel® diaphragm

### CAP ASSEMBLY

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

### HEATER BLOCK PORTING

- 1** **Standard block**
  - 2** Extra outlet block
- For more blocks, see pages 34–35

### HEATER BLOCK TYPE

- 3** **120 VAC**
- 4** **240 VAC**
- 5** No electronics
- 8** Proportional 120 VAC
- 9** Proportional 240 VAC

### 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

*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.gore.com](http://www.gore.com) or contact the factory.*

## Maximum Temperature & Operating Inlet Pressures

### HPR-2 Electric 2-piece Assembly

(Heater block and regulator body separate)

SEAT MATERIAL	MAXIMUM PRESSURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	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)
High density 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 (formerly Kel-F®)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	3600 psig (24.82 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 PRESSURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	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)
High density 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 (formerly Kel-F®)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	6000 psig (24.82 MPa)
PEEK™	Up to 380° F (193° C)	@	6000 psig (24.82 MPa)

# HPR-2 Series

## Outline & Mounting Dimensions

