

GO REGULATOR

HPR-2 Series

Steam 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 exchanger 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.



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, and 0-500 psig |
| INLET PRESSURE | up to 6000 psig at 380° F (193° C) |
| OPERATING TEMPERATURE | up to 550° F (285° C) |
| C _v COEFFICIENTS | 0.06, 0.025, 0.2 |
| INLET CONNECTIONS | 1/8" FNPT |
| OUTLET CONNECTIONS | 1/4" FNPT |

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 allow for easy maintenance.
- Unique spiral-wrapped heat exchange element provides up to 100 square inches of heat transfer area.

HPR-2 Series

How to Order

Standard items in bold

H2 - 1 Z 5 5 Q 3 C 1 1 1 4

BODY MATERIAL

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

PORT CONFIGURATION

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

TEMPERATURE RANGE / HEATING TYPE

- 5** Steam

HEATER WATTAGE

- 5** Steam

SEAT MATERIAL

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

FLOW COEFFICIENT (Cv)

- 3** **0.06**

OPTIONS

- 4** 6000 psig inlet steam heated (1-pc assembly)

CAP ASSEMBLY

- 1** Tamper-proof, standard, stainless steel

HEATER BLOCK PORTING

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

HEATER BLOCK TYPE

- 1** Steam

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

Maximum Temperature & Operating Inlet Pressures

HPR-2 Steam 2-piece Assembly

(Heater block and regulator body separate)

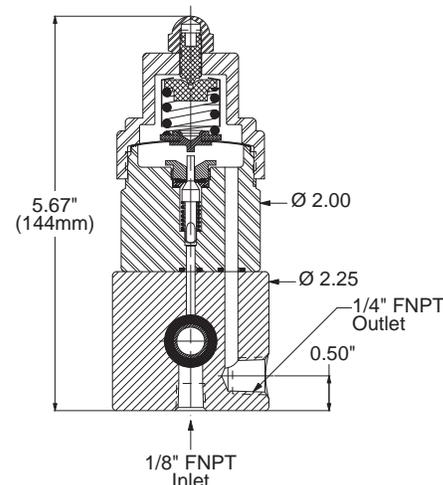
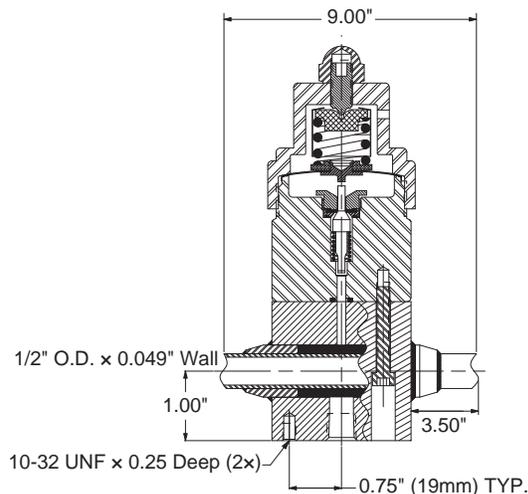
| SEAT MATERIAL | MAXIMUM PRESSURE @ | MAXIMUM OPERATING INLET PRESSURE |
|-------------------------|---------------------------------------|----------------------------------|
| Tefzel® | Up to 175° F (80° C) @ | 3600 psig (24.82 MPa) |
| | 176° F to 300° F (80° C to 148° C) @ | 1000 psig (6.90 MPa) |
| | 301° F to 380° F (148° C to 193° C) @ | 400 psig (2.76 MPa) |
| High density Teflon® | 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 Steam 1-piece Assembly

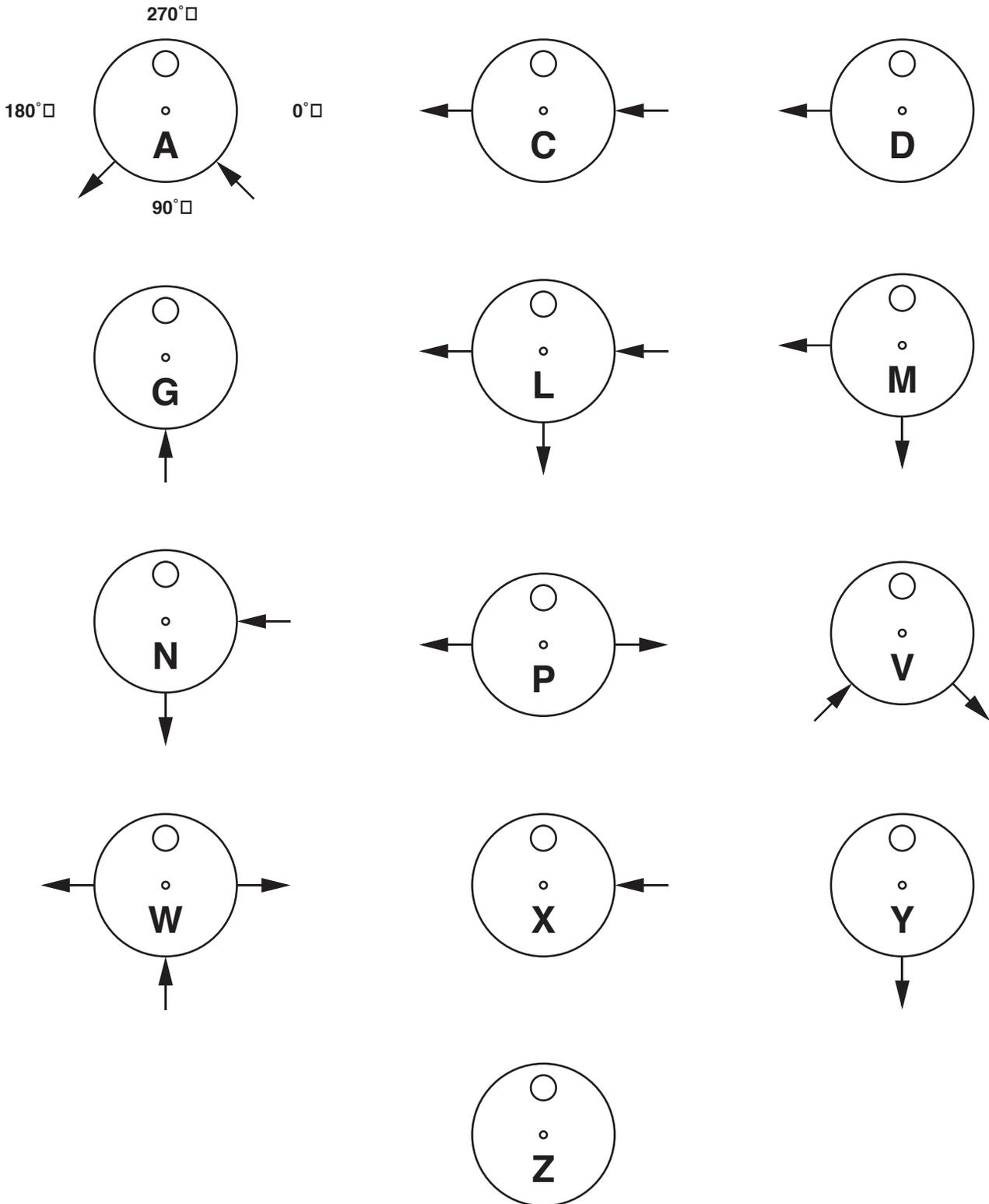
(Integral heater block and regulator)

| SEAT MATERIAL | MAXIMUM PRESSURE @ | MAXIMUM OPERATING INLET PRESSURE |
|-------------------------|---------------------------------------|----------------------------------|
| Tefzel® | Up to 175° F (80° C) @ | 3600 psig (24.82 MPa) |
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| 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) |

Outline & Mounting Dimensions



Porting Configurations (Pressure Regulator Body) for HPR-2 Steam & Electric and HPR-2XW Steam & Electric Series



Location of ports from top view. Arrow pointing toward body is inlet. Arrow pointing away from body is outlet.

Heater Block Configurations for HPR-2 Steam & Electric and HPR-2XW Steam & Electric Series

