Vaporizing Pressure Regulators
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.

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

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.

Technical Data

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GO Regulator
405 Centura Court • PO Box 4866 (29305) • Spartanburg, SC 29303
Phone (864) 574-7966 Fax (864) 574-5608
www.goreg.com • sales@goreg.com
**HPR-2 Series**

**How to Order**

Standard items in bold

<table>
<thead>
<tr>
<th>BODY MATERIAL</th>
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<tr>
<td>4</td>
<td>Monel®</td>
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| FLOW COEFFICIENT (Cv) | 3 | 0.06 |

**Maximum Temperature & Operating Inlet Pressures**

**HPR-2 Steam 2-piece Assembly** (Heater block and regulator body separate)

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**Outline & Mounting Dimensions**

![Diagram](chart.png)
**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 |
| z 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
# HPR-2 Series

## How to Order

**Standard items in bold**

### BODY MATERIAL

1. 316L stainless steel
2. 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 Teflon®
- **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.)
2. TCO thermistor w/Teflon®/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

## Maximum Temperature & Operating Inlet Pressures

### HPR-2 Electric 2-piece Assembly

(Heater block and regulator body separate)

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(Integral heater block and regulator)

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**HPR-2XW Series**
Steam Heated Pressure Regulator

**Introduction**

The HPR-2XW 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-2XW 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.

Completing this modular design is the incorporation of a removable heat exchange unit. This allows the user to remove and clean or replace the exchanger. This is especially useful when heating dirty liquids or liquids that polymerize and clog the heat exchange screen.

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HPR-2XW Series

Outline & Mounting Dimensions

Steam Tube 1/2" O.D. x 0.049" Wall

10-32UNF x 0.25 Min Full Thds (2x)

.75" (19mm) Typ.

5.67" (144mm)

Standard

3.5" (25.4mm)

1.00" (25.4mm)

1/8" FNPT Inlet

0.50" (12.7mm)

1/4" FNPT Outlet

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

Weight: 4.0lbs (1.81kg)

Weight: 4.0lbs (1.81kg)

GO Regulator Vaporizing Pressure Regulators

Ssteam Tube 1/2" O.D. x 0.049" Wall

10-32UNF x 0.25 Min Full Thds (2x)

.75" (19mm) Typ.

5.67" (144mm)

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

Weight: 4.0lbs (1.81kg)
HPR-2XW Series
Electrically Heated Pressure Regulator

Introduction

The HPR-2XW 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-2XW 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. Completing this modular design is the incorporation of a removable heat exchanger unit. This allows the user to remove and clean, or replace the exchanger. This is especially useful when heating dirty liquids or liquids that polymerize and clog the heat exchange screen.

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

<table>
<thead>
<tr>
<th>CONSTRUCTION</th>
<th>316L stainless steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTLET PRESSURES</td>
<td>0–10, 0–25, 0–50, 0–100, 0–250, and 0–500 psig</td>
</tr>
<tr>
<td>OPERATING TEMPERATURE</td>
<td>up to 380° F (193° C)</td>
</tr>
<tr>
<td>HEATING CAPACITY RANGES (IN WATTS)</td>
<td>40, 50, 100, and 150</td>
</tr>
<tr>
<td>CV COEFFICIENTS</td>
<td>0.06, 0.025, 0.2</td>
</tr>
<tr>
<td>CERTIFICATIONS</td>
<td>CSA certification # LR-82566-5</td>
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<tr>
<td></td>
<td>ATEX Directive 94/9/EC</td>
</tr>
<tr>
<td></td>
<td>Certification # TRL03ATEX11001X</td>
</tr>
</tbody>
</table>

Features & Benefits

- Optional Hastelloy® C & 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

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## How to Order

**Standard items in bold**

**BODY MATERIAL**
1. 316L stainless steel
2. Monel®

**PORT CONFIGURATION**
Z. One inlet port, one outlet port

**TEMPERATURE RANGE / HEATING TYPE**
1. 55° F to 85° F
2. 75° F to 175° F
3. 130° F to 300° F
4. 260° F to 380° F

**HEATER WATTAGE**
1. 40W
2. 50W
3. 100W
4. 150W

**SEAT MATERIAL**
A. Tefzel®
B. CF Teflon®
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.)
6. 6000 psig inlet w/standard thermistor (1-pc assy.)
B. TCO thermistor w/ Teflon®/Inconel® diaphragm

**CAP ASSEMBLY**
1. Tamper-proof, standard, stainless steel

**HEATER BLOCK PORTING**
1. Standard block
2. Extra outlet block

**HEATER BLOCK TYPE**
6. 120 VAC, HPR-2XW
7. 240 VAC, HPR-2XW
0. Proportional 120 VAC, HPR-2XW
A. Proportional 240 VAC, HPR-2XW

**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-2XW Electric 2-piece Assembly
(Heater block and regulator body separate)

<table>
<thead>
<tr>
<th>SEAT MATERIAL</th>
<th>MAXIMUM PRESSURE</th>
<th>MAXIMUM OPERATING INLET PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tefzel®</td>
<td>Up to 175° F (80° C)</td>
<td>3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td></td>
<td>176° F to 300° F (80° C to 148° C)</td>
<td>1000 psig (6.90 MPa)</td>
</tr>
<tr>
<td></td>
<td>301° F to 380° F (148° C to 193° C)</td>
<td>400 psig (2.76 MPa)</td>
</tr>
<tr>
<td>High density Teflon®</td>
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<td>PCTFE (formerly Kel-F®)</td>
<td>Up to 380° F (193° C)</td>
<td>3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td>Polyimide</td>
<td>Up to 380° F (193° C)</td>
<td>3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td>PEEK™</td>
<td>Up to 380° F (193° C)</td>
<td>3600 psig (24.82 MPa)</td>
</tr>
</tbody>
</table>

### HPR-2XW Electric 1-piece Assembly
(Integral heater block and regulator)

<table>
<thead>
<tr>
<th>SEAT MATERIAL</th>
<th>MAXIMUM PRESSURE</th>
<th>MAXIMUM OPERATING INLET PRESSURE</th>
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<td>3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td>Polyimide</td>
<td>Up to 380° F (193° C)</td>
<td>6000 psig (42.82 MPa)</td>
</tr>
<tr>
<td>PEEK™</td>
<td>Up to 380° F (193° C)</td>
<td>6000 psig (42.82 MPa)</td>
</tr>
</tbody>
</table>
HPR-2XW Series

Maximum Temperature & Operating Inlet Pressures

Panel Mount Option

Panel mount option requires 1.39" (35.3mm) minimum diameter panel cut out

Weight = 8.7lb (3.95kg)
CV 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 CV 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 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

Features & Benefits
- Hastelloy® C 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 240VAC
- Optional TCO heating cartridge and proportional controller

Technical Data
<table>
<thead>
<tr>
<th>CONSTRUCTION</th>
<th>316L stainless steel</th>
</tr>
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<tbody>
<tr>
<td>OUTLET PRESSURES</td>
<td>0–10, 0–25, 0–50, 0–100, 0–250, and 0–500 psig</td>
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<tr>
<td>OPERATING TEMPERATURE</td>
<td>up to 550° F (285° C)</td>
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<tr>
<td>HEATING CAPACITY RANGES (IN WATTS)</td>
<td>40, 50, 100, and 150</td>
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<td>Cö COEFFICIENTS</td>
<td>0.06, 0.025, 0.2</td>
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www.goreg.com • sales@goreg.com
CV Series Cylinder Vaporizer

**How to Order**

Standard items in bold

**CV – 4**

1. **BODY MATERIAL**
   - 1 316L stainless steel
   - 4 Monel®

2. **PORT CONFIGURATION**
   - A Standard

3. **SEAT MATERIAL (1ST STAGE)**
   - A Tefzel®
   - B CF Teflon®
   - C Polyimide
   - H PCTFE (formerly Kel-F® 81)
   - Q PEEK™

4. **FLOW COEFFICIENT (1ST STAGE)**
   - 3 0.06

5. **CAP ASSEMBLY (1ST STAGE)**
   - 1 Tamper-proof, stainless steel
   - 4 Tamper-proof, panel mount, stainless steel

6. **SEAT MATERIAL (2ND STAGE)**
   - A Tefzel®
   - B CF Teflon®
   - C Polyimide
   - H PCTFE (formerly Kel-F® 81)
   - Q PEEK™

7. **FLOW COEFFICIENT (2ND STAGE)**
   - 3 0.06

8. **VOLTAGE**
   - 1 120 VAC
   - 2 240 VAC

9. **THERMISTOR TYPE**
   - 1 Thermally protected (TCO)
   - 2 Non-thermally protected

10. **CONTROLLER TYPE**
    - 1 On/Off
    - 2 Proportional

11. **HEATER WATTAGE**
    - 1 40W
    - 2 50W
    - 3 100W
    - 4 150W

12. **TEMPERATURE RANGE**
    - 1 55° F to 85° F
    - 2 75° F to 175° F
    - 3 130° F to 300° F
    - 4 260° F to 380° F

13. **CAP ASSEMBLY (2ND STAGE)**
    - Tamper-proof, stainless steel
    - Tamper-proof, panel mount, stainless steel

14. **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

**Maximum Temperature & Operating Inlet Pressures**

<table>
<thead>
<tr>
<th>SEAT MATERIAL</th>
<th>MAXIMUM PRESSURE</th>
<th>@</th>
<th>MAXIMUM OPERATING INLET PRESSURE</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Polyimide</td>
<td>Up to 380° F (193° C)</td>
<td>@</td>
<td>6000 psig (41.37 MPa)</td>
</tr>
<tr>
<td>PEEK™</td>
<td>Up to 380° F (193° C)</td>
<td>@</td>
<td>6000 psig (41.37 MPa)</td>
</tr>
</tbody>
</table>
CV Series Cylinder Vaporizer

Outline and Mounting Dimensions

Second Stage

First Stage

10.3" (262mm)

6.78" (172mm)

5.61" (142mm)

1.51" (38.3mm)

1/8" FNPT Outlet

0.74"

1/8" FNPT Inlet

0.74"

Ø 2.0

3.39" Typ.
CV Series Cylinder Vaporizer
Steam Heated Two-stage Pressure Regulators

Introduction

The Cylinder Vaporizer 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 design of the Cylinder Vaporizer consists of heat exchanger and pressure control sections. The pressure control section is patterned after the time proven design of the CYL-20 two-stage pressure reducing regulator and provides the same excellent outlet pressure stability with varying inlet pressures. 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.

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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>CONSTRUCTION</td>
<td>316L stainless steel</td>
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<tr>
<td>OUTLET PRESSURES</td>
<td>0–10, 0–25, 0–50, 0–100, 0–250, and 0–500 psig</td>
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<tr>
<td>Cv COEFFICIENTS</td>
<td>0.06, 0.025, 0.2</td>
</tr>
</tbody>
</table>

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

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www.goreg.com • sales@goreg.com
# CV Series Cylinder Vaporizer

## How to Order

**Standard items in bold**

<table>
<thead>
<tr>
<th>CV – 1</th>
<th>1st Stage</th>
<th>2nd Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q</td>
<td>3</td>
<td>G</td>
</tr>
<tr>
<td>A</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Q</td>
<td>3</td>
<td>G</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

### BODY MATERIAL

- 1 316L stainless steel
- 4 Monel®

### PORT CONFIGURATION

- A Standard

### SEAT MATERIAL (1ST STAGE)

- A Tefzel®
- B CF Teflon®
- C Polyimide
- H PCTFE (formerly Kel-F® 81)
- Q PEEK™

### FLOW COEFFICIENT (1ST STAGE)

- 3 0.06

### CAP ASSEMBLY (1ST STAGE)

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

### SEAT MATERIAL (2ND STAGE)

- A Tefzel®
- B CF Teflon®
- C Polyimide
- H PCTFE (formerly Kel-F® 81)
- Q PEEK™

### FLOW COEFFICIENT (2ND STAGE)

- 3 0.06

### VOLTAGE

- 5 Steam

### THERMISTOR TYPE

- 5 Steam

### CONTROLLER TYPE

- 5 Steam

### HEATER WATTAGE

- 5 Steam

### TEMPERATURE RANGE

- 5 Steam

### CAP ASSEMBLY (2ND STAGE)

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

### 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

## Maximum Temperature & Operating Inlet Pressures

<table>
<thead>
<tr>
<th>Seat Material</th>
<th>Maximum Pressure</th>
<th>Maximum Operating Inlet Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tefzel®</td>
<td>Up to 175°F (80°C)</td>
<td>@ 3600 psig (24.82 MPa)</td>
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</tr>
</tbody>
</table>
CV Series Cylinder Vaporizer

Outline and Mounting Dimensions

Second Stage

Tube-1/2" O.D. x 0.049" Wall

First Stage

6.78" (172mm)

9.0"

3.39" TYP.

1/8" FNPT Outlet

1/8" FNPT Inlet

Ø 2.0

Ø 2.24

0.74"
DHR Series
Electrically Heated Dual Pressure Regulators

Introduction
The Dual 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. Significant space savings can be realized due to the utilization of two discrete regulators that are heated by a common source.

The modular design of the Dual Heated Regulator consists of a heating element and pressure control sections. The pressure control sections are 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 a heating element.

The Dual Heated Pressure Regulators are 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

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
- Available in 120VAC or 240VAC
- Optional TCO heating cartridge and proportional controller

Technical Data

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<tr>
<td>HEATING CAPACITY RANGES (IN WATTS)</td>
<td>40, 50, 100, and 150</td>
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<tr>
<td>C2 COEFFICIENTS</td>
<td>0.06, 0.025, 0.2</td>
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<tr>
<td>CERTIFICATIONS</td>
<td>ATEX Directive 94/9/EC Certification # TRL03ATEX11001X</td>
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www.goreg.com • sales@goreg.com
DHR Series

How to Order

Standard items in bold

<table>
<thead>
<tr>
<th>Regulator A</th>
<th>Regulator B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DHR – 1 A C 3 I 1</strong></td>
<td><strong>C 3 G 1 4 I 1 I 1 I 1</strong></td>
</tr>
</tbody>
</table>

**BODY MATERIAL**
- 1: 316L stainless steel
- 4: Monel®

**PORT CONFIGURATION**
- A: Standard
  For more configurations, see page 34

**SEAT MATERIAL (REGULATOR A)**
- A: Tefzel®
- B: CF Teflon®
- C: Polyimide
- H: PCTFE (formerly Kel-F® 81)
- Q: PEEK™

**FLOW COEFFICIENT (REGULATOR A)**
- 3: 0.06

**OUTPUT RANGE (REGULATOR A)**
- 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 (REGULATOR A)**
- 1: Tamper-proof, stainless steel
- 4: Tamper-proof, panel mount, stainless steel

**SEAT MATERIAL (REGULATOR B)**
- A: Tefzel®
- B: CF Teflon®
- C: Polyimide
- H: PCTFE (formerly Kel-F® 81)
- Q: PEEK™

**FLOW COEFFICIENT (REGULATOR B)**
- 3: 0.06

**OUTPUT RANGE (REGULATOR B)**
- C: 0–10 psig
- D: 0–25 psig
- E: 0–50 psig
- G: 0–100 psig
- I: 0–250 psig
- J: 0–500 psig

**VOLTAGE**
- 1: 120 VAC
- 2: 240 VAC

**THERMISTOR TYPE**
- 1: Thermally protected (TCO)
- 2: Non-thermally protected

**CONTROLLER TYPE**
- 1: On/Off
- 2: Proportional

**HEATER WATTAGE**
- 1: 40W
- 2: 50W
- 3: 100W
- 4: 150W

**TEMPERATURE RANGE**
- 1: 55° F to 85° F
- 2: 75° F to 175° F
- 3: 130° F to 300° F
- 4: 260° F to 380° F
- 6: No electronics

**CAP ASSEMBLY (REGULATOR B)**
- 1: Tamper-proof, stainless steel
- 4: Tamper-proof, panel mount, stainless steel

**Maximum Temperature & Operating Inlet Pressures**

<table>
<thead>
<tr>
<th>SEAT MATERIAL</th>
<th>MAXIMUM PRESSURE</th>
<th>@</th>
<th>MAXIMUM OPERATING INLET PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tefzel®</td>
<td>Up to 175° F (80° C)</td>
<td>@</td>
<td>3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td></td>
<td>176° F to 300° F  (80° C to 148° C)</td>
<td>@</td>
<td>1000 psig (6.90 MPa)</td>
</tr>
<tr>
<td></td>
<td>301° F to 380° F  (148° C to 193° C)</td>
<td>@</td>
<td>400 psig (2.76 MPa)</td>
</tr>
<tr>
<td>High density Teflon®</td>
<td>Up to 175° F (80° C)</td>
<td>@</td>
<td>3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td></td>
<td>176° F to 300° F  (80° C to 148° C)</td>
<td>@</td>
<td>1000 psig (6.90 MPa)</td>
</tr>
<tr>
<td></td>
<td>301° F to 380° F  (148° C to 193° C)</td>
<td>@</td>
<td>400 psig (2.76 MPa)</td>
</tr>
<tr>
<td>PCTFE (formerly Kel-F®)</td>
<td>Up to 380° F (193° C)</td>
<td>@</td>
<td>3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td>Polyimide</td>
<td>Up to 380° F (193° C)</td>
<td>@</td>
<td>6000 psig (41.37 MPa)</td>
</tr>
<tr>
<td>PEEK™</td>
<td>Up to 380° F (193° C)</td>
<td>@</td>
<td>6000 psig (41.37 MPa)</td>
</tr>
</tbody>
</table>
**Introduction**

The Dual 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. Significant space savings can be realized due to the utilization of two discrete regulators that are heated by a common source.

The modular design of the Dual Heated Regulator consists of a heating element and pressure control sections. The pressure control sections are 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 a body and a heating element.

**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

**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

**Technical Data**

<table>
<thead>
<tr>
<th>CONSTRUCTION</th>
<th>316L stainless steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTLET PRESSURES</td>
<td>0–10, 0–25, 0–50, 0–100, 0–250, and 0–500 psig</td>
</tr>
<tr>
<td>OPERATING TEMPERATURE</td>
<td>up to 550° F (285° C)</td>
</tr>
<tr>
<td>CV COEFFICIENTS</td>
<td>0.06, 0.025, 0.2</td>
</tr>
</tbody>
</table>
DHR Series

How to Order
Standard items in bold

DHR – 1  A  H  3  J  1  Q  3  E  1  5  5  5  5

BODY MATERIAL
1 316L stainless steel
4 Monel®

PORT CONFIGURATION
A Standard
For more configurations, see page 34.

SEAT MATERIAL (REGULATOR A)
A Tefzel®
B CF Teflon®
C Polymide
H PCTFE (formerly Kel-F® B1)
Q PEEK™

FLOW COEFFICIENT (REGULATOR A)
3 0.06

OUTPUT RANGE (REGULATOR A)
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 (REGULATOR A)
1 Tamper-proof, stainless steel
4 Tamper-proof, panel mount, stainless steel

SEAT MATERIAL (REGULATOR B)
A Tefzel®
B CF Teflon®
C Polymide
H PCTFE (formerly Kel-F® B1)
Q PEEK™

VOLTAGE
5 Steam

THERMISTOR TYPE
5 Steam

CONTROLLER TYPE
5 Steam

HEATER WATTAGE
5 Steam

TEMPERATURE RANGE
5 Steam

CAP ASSEMBLY (REGULATOR B)
1 Tamper-proof, stainless steel
4 Tamper-proof, panel mount, stainless steel

OUTPUT RANGE (REGULATOR B)
C 0–10 psig
D 0–25 psig
E 0–50 psig
G 0–100 psig
I 0–250 psig
J 0–500 psig

FLOW COEFFICIENT
3 0.06

Maximum Temperature & Operating Inlet Pressures

<table>
<thead>
<tr>
<th>SEAT MATERIAL</th>
<th>MAXIMUM PRESSURE</th>
<th>@ MAXIMUM OPERATING INLET PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tefzel*</td>
<td>Up to 175°F (80°C)</td>
<td>3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td></td>
<td>176°F to 300°F (80°C to 148°C)</td>
<td>1000 psig (6.90 MPa)</td>
</tr>
<tr>
<td></td>
<td>301°F to 380°F (148°C to 193°C)</td>
<td>400 psig (2.76 MPa)</td>
</tr>
<tr>
<td>High density Teflon*</td>
<td>Up to 175°F (80°C)</td>
<td>3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td></td>
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<td>PCTFE (formerly Kel-F*)</td>
<td>Up to 380°F (193°C)</td>
<td>3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td>Polymide</td>
<td>Up to 380°F (193°C)</td>
<td>6000 psig (41.37 MPa)</td>
</tr>
<tr>
<td>PEEK™</td>
<td>Up to 380°F (193°C)</td>
<td>6000 psig (41.37 MPa)</td>
</tr>
</tbody>
</table>
DHR Series

Outline and Mounting Dimensions

Regulator "A"

Regulator "B"

1/2" Tube

Ø 2.0

6.78" (172mm)

9.0" (228.6mm)

1/8" FNPT Outlet

Ø 2.24

1/8" FNPT Outlet

1/8" FNPT Outlet

1/8" FNPT Outlet

3.39" TYP.

1.48"

0.74" TYP.
MV-1 Series
Miniature Vaporizing Pressure Regulator

Introduction

The MV-1 Series Miniature Vaporizing Regulator is one of the smallest envelopes in the industry. Weighing in at a scant 0.86 pounds, the MV-1 is designed to supply heat to samples entering instrumentation systems where space is at a premium and quality cannot be compromised. It can be used to preheat liquids, to prevent condensation of gases or to vaporize liquids prior to gas analysis.

The pressure control section of the MV-1 is patterned after the time-tested design of our CPR-1 and provides the same excellent outlet pressure stability. The heating plate utilizes GO Regulator’s unique heating element and incorporates an optional Thermal Cutout Device (TCO). This device prevents any exposed surface of the unit from exceeding 200° C under normal or fault conditions and is exclusive to GO Regulator’s line of electrically heated vaporizing regulators. Offered in both 12 VDC and 24 VDC, the MV-1 Series offers the utmost in unequaled system safety and performance.

Typical Applications

**Analytical process sample conditioning systems:**
- Petrochemical refineries
- Chemical production facilities
- Pilot plants (chemical & petrochemical)
- Portable low voltage analyzers

Technical Data

<table>
<thead>
<tr>
<th>CONSTRUCTION</th>
<th>316L stainless steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTLET PRESSURES</td>
<td>0–10, 0–25, 0–50, 0–100, 0–250, and 0–500 psig</td>
</tr>
<tr>
<td>OPERATING TEMPERATURE</td>
<td>up to 380° F (193° C)</td>
</tr>
<tr>
<td>HEATING CAPACITY RANGES (IN WATTS)</td>
<td>40 and 100</td>
</tr>
</tbody>
</table>

Features & Benefits

- Electro polished body with better than 25 Ra finish in diaphragm cavity for an optimal sealing surface
- Bubble-tight shutoff
- Unique Spiro-Wind heating element provides exceptionally even heating
- Available in 12 VDC and 24 VDC
- Optional TCO heating cartridge and proportional controller
MV-1 Series

How to Order
Standard items in bold

**BODY MATERIAL**
1 316L stainless steel
4 Monel®

**PORT CONFIGURATION**
A Standard

**PORT TYPE**
0 1/4” FNPT (all ports)
A 1/8” FNPT (all ports)
B 1/8” FNPT inlets; 1/4” FNPT outlets

**TEMPERATURE RANGE**
1 55° F to 85° F
2 75° F to 175° F
3 130° F to 300° F
4 260° F to 380° F (Non TCO units only)

**HEATER WATTAGE**
1 40W
2 40W with thermal cutout (TCO)
3 100W
4 100W with thermal cutout (TCO)

**HEATER VOLTAGE**
B 12 VDC
C 24 VDC

**CAP STYLE**
1 Tamper-proof, stainless steel
4 Tamper-proof, panel mount, stainless steel

**CAVITY O-RING MATERIAL**
D Viton®
I Teflon®

**SEAT MATERIAL**
A Tefzel®
B CF Teflon®
C Polyimide
H PCTFE (formerly Kel-F® 81)
Q PEEK™

**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

**FLOW COEFFICIENT (Cv)**
3 0.06
C 0.025

---

**Maximum Temperature & Operating Inlet Pressures**

<table>
<thead>
<tr>
<th>SEAT MATERIAL</th>
<th>MAXIMUM PRESSURE</th>
<th>OPERATING INLET PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tefzel®</td>
<td>Up to 175° F</td>
<td>@ 3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td></td>
<td>176° F to 300° F</td>
<td>@ 1000 psig (6.90 MPa)</td>
</tr>
<tr>
<td></td>
<td>(80° C to 148° C)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>301° F to 380° F</td>
<td>@ 400 psig (2.76 MPa)</td>
</tr>
<tr>
<td></td>
<td>(148° C to 193° C)</td>
<td></td>
</tr>
<tr>
<td>High density Teflon®</td>
<td>Up to 175° F</td>
<td>@ 3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td></td>
<td>176° F to 300° F</td>
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<tr>
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</tr>
<tr>
<td>PCTFE (formerly Kel-F®)</td>
<td>Up to 380° F</td>
<td>@ 3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td></td>
<td>(193° C)</td>
<td></td>
</tr>
<tr>
<td>Polymide</td>
<td>Up to 380° F</td>
<td>@ 3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td></td>
<td>(193° C)</td>
<td></td>
</tr>
<tr>
<td>PEEK™</td>
<td>Up to 380° F</td>
<td>@ 3600 psig (24.82 MPa)</td>
</tr>
<tr>
<td></td>
<td>(193° C)</td>
<td></td>
</tr>
</tbody>
</table>
GO Regulator Vaporizing Pressure Regulators

MV-1 Series

Outline and Mounting Dimensions

- Model: GO REGULATOR
- P/N: 110930
- 12 VDC-RANGE B

- Specifications:
  - 1: 75°F / 24°C
  - 2: 80°F / 27°C
  - 3: 85°F / 29°C
  - 4: 95°F / 35°C
  - 5: 110°F / 43°C
  - 6: 130°F / 54°C
  - 7: 175°F / 79°C

- Dimensions:
  - Ø 1.50
  - Ø 1.62
  - 6 ± 0.25
  - 0.85"
  - 3.34"

- Weight: 0.86lbs

- Features:
  - 0.06 Cv and Panel Mount Options
  - Panel mount option requires 1.39 (35.3mm) minimum diameter panel cut out

- Diagrams showing outline and mounting details.
Introduction

The HXR Series Insitu pressure regulator was designed to offset the Joules-Thompson temperature effect. This effect is the cooling that occurs during a pressure drop as a gas passes through an orifice. With HXR Series, the cooling is offset by placing the pressure regulating orifice at the tip of the probe assembly in the process line. As a result, the pressure reduced sample gas passes through a section of the probe that has heat exchange fins. As the cooled sample gas flows through this section of the probe assembly, it is reheated by heat picked up from the warmer high pressure process gas flowing around the outside of the probe assembly, thus returning the sample to the original process line working temperature and also preventing the condensation of liquids in the sample.

Features & Benefits

- Prevents liquid carry over
- Insitu design allows for easy installation directly into process line
- Ensures a more representative and accurate sample analysis of process streams
- Electropolished body with better than 25 Ra finish in diaphragm cavity
- Bubble-tight shutoff
- Available in ½", ¾", and 1" MNPT probe gland connections
- 70 micron filter
- Port sizes & configuration ¼" FNPT: 3 low pressure ports situated 90° apart
- Optional probe lengths available
- Optional gauge and relief valve

Technical Data

<table>
<thead>
<tr>
<th>CONSTRUCTION</th>
<th>316L stainless steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTLET PRESSURES</td>
<td>0–10, 0–25, 0–50, 0–100, 0–250, and 0–500 psig</td>
</tr>
<tr>
<td>MAX. INLET WORKING PRESSURE AT MAX. TEMP.</td>
<td>3600 psig</td>
</tr>
<tr>
<td>Cv COEFFICIENTS</td>
<td>0.025</td>
</tr>
</tbody>
</table>

Typical Applications

Analytical process sample conditioning systems:
- Gas pipelines
HXR Series

How to Order

Standard items in bold

BODY MATERIAL
1 316L stainless steel

OPTIONAL PORTING TYPES
1 ¼˝ FNPT

SURFACE FINISH OF DIAPHRAGM CAVITY
1 < 25 Ra

SEAT MATERIAL
A Tefzel®
B CF Teflon®
C Polyimide
H PCTFE (formerly Kel-F® 81)
Q PEEK™

MOUNTING THREAD
1 ¾˝ MNPT

INSERTION LENGTH
0 No extension (3.75˝ ins. length)
1 Short extension (8.05˝ ins. length)
2 Long extension (11.05˝ ins. length)

CAP ASSEMBLY
1 Stainless steel

DIAPHRAGM LINER / BACKING
6 Tefzel® ring / stainless steel

DIAPHRAGM TYPE
1 Standard

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

<table>
<thead>
<tr>
<th>SEAT MATERIAL</th>
<th>MAXIMUM TEMPERATURE</th>
<th>inhibition @</th>
<th>MAXIMUM OPERATING INLET PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tefzel®</td>
<td>150°F (66°C)</td>
<td>@</td>
<td>3600 psig (20.68 MPa)</td>
</tr>
<tr>
<td>High density Teflon®</td>
<td>150°F (66°C)</td>
<td>@</td>
<td>3600 psig (20.68 MPa)</td>
</tr>
<tr>
<td>PCTFE (formerly Kel-F® 81)</td>
<td>175°F (80°C)</td>
<td>@</td>
<td>3600 psig (20.68 MPa)</td>
</tr>
<tr>
<td>Polyimide</td>
<td>500°F (260°C)</td>
<td>@</td>
<td>3600 psig (20.68 MPa)</td>
</tr>
<tr>
<td>PEEK™</td>
<td>500°F (260°C)</td>
<td>@</td>
<td>3600 psig (20.68 MPa)</td>
</tr>
</tbody>
</table>

Outline and Mounting Dimensions

<table>
<thead>
<tr>
<th>EXTENDER</th>
<th>INSERTION LENGTH</th>
<th>OVERALL LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>None (–0)</td>
<td>3.7˝</td>
<td>8.1˝</td>
</tr>
<tr>
<td>Short (–1)</td>
<td>8.0˝</td>
<td>12.4˝</td>
</tr>
<tr>
<td>Long (–2)</td>
<td>11.0˝</td>
<td>15.4˝</td>
</tr>
</tbody>
</table>
**Introduction**

The heart of the LNG Vaporizer Assembly is the well-known HPR-2 Series heated pressure control valve. This unit has been used in many successful applications requiring heating of a process stream sample prior to analysis to prevent freeze up or for vaporization. The HPR-2 is a modularized unit consisting of a heated section and pressure control section. A field demonstration has now shown this vaporizer assembly to be serviceable in the vaporization of LNG product for analytical purposes and that homogeneous samples can be obtained under steady state operating conditions.

The HPR-2 pressure control valve is contained in a painted, insulated sheet metal enclosure and combined with an insulated input line plus a pressure gauge and relief valve. The heater section of the electric version is equipped with a thermostat for temperature control and is constructed to meet standard Division 1 Electrical Code requirements.

**Typical Applications**

- LNG loading and off-loading points
- Petrochemical refineries
- Chemical production facilities
- Natural gas pipelines

**Technical Data – Steam Heated**

| 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) |
| Cv COEFFICIENTS | 0.06, 0.025, 0.2 |
| INLET CONNECTIONS | ½” FNPT |
| OUTLET CONNECTIONS | ¼” FNPT |

**Technical Data – Electrically Heated**

| 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 |
| Cv 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 and steam-heated
- Optional TCO heating cartridge and proportional controller

GO Regulator
405 Centura Court • PO Box 4866 (29305) • Spartanburg, SC 29303
Phone (864) 574-7966 Fax (864) 574-5608
www.goreg.com • sales@goreg.com
How to Order

Standard items in bold

**BASIC PART NUMBER**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>102830</td>
<td>0–10 psig electronically heated</td>
</tr>
<tr>
<td>102831</td>
<td>0–25 psig electronically heated</td>
</tr>
<tr>
<td>102832</td>
<td>0–50 psig electronically heated</td>
</tr>
<tr>
<td>102833</td>
<td>0–100 psig electronically heated</td>
</tr>
<tr>
<td>102834</td>
<td>0–250 psig electronically heated</td>
</tr>
<tr>
<td>102835</td>
<td>0–500 psig electronically heated</td>
</tr>
<tr>
<td>109551</td>
<td>0–25 psig steam heated</td>
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<tr>
<td>109552</td>
<td>0–50 psig steam heated</td>
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<tr>
<td>109553</td>
<td>0–100 psig steam heated</td>
</tr>
<tr>
<td>109554</td>
<td>0–250 psig steam heated</td>
</tr>
<tr>
<td>109555</td>
<td>0–500 psig steam heated</td>
</tr>
</tbody>
</table>

**SEAT MATERIAL**

- A Tefzel®
- B CF Teflon®
- C Polyimide
- Q PEEK™

**WATTAGE**

<table>
<thead>
<tr>
<th>Number</th>
<th>Wattage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40 watts</td>
</tr>
<tr>
<td>2</td>
<td>50 watts</td>
</tr>
<tr>
<td>3</td>
<td>100 watts</td>
</tr>
<tr>
<td>4</td>
<td>150 watts</td>
</tr>
<tr>
<td>5</td>
<td>Steam</td>
</tr>
</tbody>
</table>

**THERMISTOR TYPE**

- 1 Thermally protected (TCO)
- 2 Non-thermally protected
- 5 Steam

**CONTROLLER TYPE**

- 1 On/Off
- 2 Proportional
- 5 Steam

**CONFIGURATION**

- 1 Standard enclosure (painted steel)
- 2 Stainless steel enclosure
- 3 Standard enclosure, all ¼” tube
- 4 Stainless steel enclosure, all ¼” tube
- 5 Standard enclosure, ¼” tube bulkhead
- 6 Stainless steel enclosure, ¼” tube bulkhead

**HEATER BLOCK TYPE**

- 1 Steam
- 2 Steam, HPR-2XW
- 3 120 VAC
- 4 240 VAC
- 6 120 VAC, HPR-2XW
- 7 240 VAC, HPR-2XW

**TEMPERATURE RANGE**

- 1 55° F to 85° F
- 2 75° F to 175° F
- 3 130° F to 300° F
- 4 260° F to 380° F
- 5 Steam heated

---

**Maximum Temperature & Operating Inlet Pressures**

**HPR-2 Electric or Steam 2-piece Assembly**
(Heater block and regulator body separate)

<table>
<thead>
<tr>
<th>SEAT MATERIAL</th>
<th>MAXIMUM PRESSURE</th>
<th>MAXIMUM OPERATING INLET PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tefzel®</td>
<td>Up to 175° F</td>
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<td></td>
<td>176° F to 300° F</td>
<td>1000 psig (6.90 MPa)</td>
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<tr>
<td></td>
<td>301° F to 380° F</td>
<td>400 psig (2.76 MPa)</td>
</tr>
<tr>
<td>High density Teflon®</td>
<td>Up to 175° F</td>
<td>3600 psig (24.82 MPa)</td>
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<tr>
<td>PCTFE (formerly Kel-F®)</td>
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<td>Polymide</td>
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<tr>
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</table>

**HPR-2 Electric or Steam 1-piece Assembly**
(Integral heater block and regulator)

<table>
<thead>
<tr>
<th>SEAT MATERIAL</th>
<th>MAXIMUM PRESSURE</th>
<th>MAXIMUM OPERATING INLET PRESSURE</th>
</tr>
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<tr>
<td>Tefzel®</td>
<td>Up to 175° F</td>
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LNG Series

Outline & Mounting Dimensions

Electrical

Steam
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.
Porting Configurations for MV-1 Series

Location of ports from top view. Arrow pointing toward body is inlet. Arrow pointing away from body is outlet.
Porting Configurations for DHR Steam & Electric Series

Location of ports from to of regulator "A". 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
**For Your Safety**

It is solely the responsibility of the system designer and user to select products suitable for their specific application requirements and to ensure proper installation, operation, and maintenance of these products. Material compatibility, product ratings and application details should be considered in the selection. Improper selection or use of products described herein can cause personal injury or property damage.
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