

# GO REGULATOR, INC.

## Vaporizing Pressure Regulators

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pressure regulators



CRANE Instrumentation & Sampling, Go Regulator  
PO Box 4866 • Spartanburg, SC 29305-4866  
(864) 574-7966 • [www.goreg.com](http://www.goreg.com)

## **For Your Safety**

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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. When selecting products, the total system design must be considered to ensure safe, trouble-free performance. 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.

Contact your authorized GO Regulator sales and service representative for information about additional sizes and special alloys.

## **SAFETY WARNING:**

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GO Regulator products are designed for installation only by professional suitably qualified licensed system installers experienced in the applications and environments for which the products are intended. These products are intended for integration into a system. Where these products are to be used with flammable or hazardous media, precautions must be taken by the system designer and installer to ensure the safety of persons and property. Flammable or hazardous media pose risks associated with fire or explosion, as well as burning, poisoning or other injury or death to persons and/or destruction of property. The system designer and installer must provide for the capture and control of such substances from any vents in the product(s). The system installer must not permit any leakage or uncontrolled escape of hazardous or flammable substances. The system operator must be trained to follow appropriate precautions and must inspect and maintain the system and its components including the product(s) and at regular intervals in accordance with timescales recommended by the supplier to prevent unacceptable wear or failure.

## 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, 0-500, 0-750 and 0-1000 psig
INLET PRESSURE	up to 6000 psig at 380° F (193° C)
OPERATING TEMPERATURE	up to 500° F (260° C)
C <sub>v</sub> 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.
- INCONEL® diaphragm standard.

# HPR-2 Series

## How to Order

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://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](http://www.goreg.com/products/matrix/index.htm)

Standard items in bold

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

### 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

- 5 Steam**

### HEATER WATTAGE

- 5 Steam**

### SEAT MATERIAL

- A Tefzel®
- B Ceramic Filled 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

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

- 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
- W 0-750 psig
- K 0-1000 psig (BP-6 topworks)

NOTE: Contact the factory for any additional requirements.

## Maximum Temperature & Operating Inlet Pressures

### HPR-2 Steam 2-piece Assembly

(Heater block and regulator body separate)

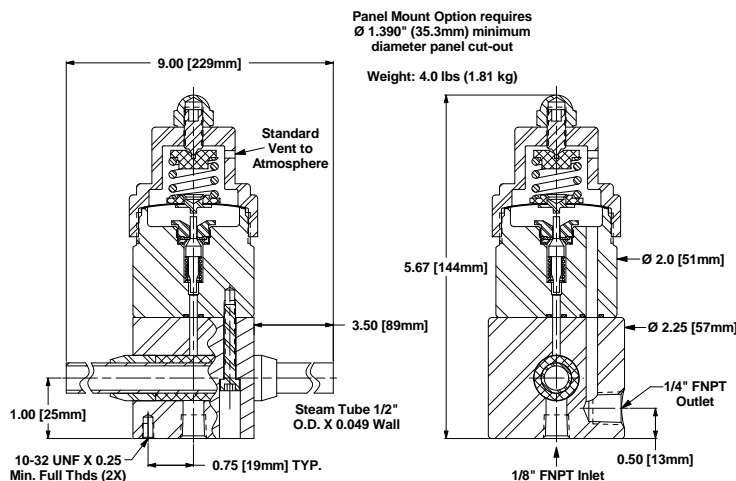
SEAT MATERIAL	MAXIMUM TEMPERATURE @	MAXIMUM OPERATING INLET PRESSURE
Ceramic Filled PTFE, Tefzel®, & PCTFE	Up to 380° F (193° C) @	400 psig (2.76 MPa)
PEEK™	Up to 500° F (260° C) @	3600 psig (24.82 MPa)

### HPR-2 Steam 1-piece Assembly

(Integral heater block and regulator)

SEAT MATERIAL	MAXIMUM TEMPERATURE @	MAXIMUM OPERATING INLET PRESSURE
Ceramic Filled PTFE, Tefzel®, & PCTFE	Up to 380° F (193° C) @	400 psig (2.76 MPa)
PEEK™	Up to 380° F (193° C) @	6000 psig (41.37 MPa)

## Outline & Mounting Dimensions



## HPR-2 Series "Next Generation"

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).

Now available is the Next Generation electronics in all GO Regulator electrically heated regulators. In addition to quicker heating and more stable set temperatures, is the ability to remotely control and monitor the unit utilizing the new CANbus/Modbus feature. By utilizing one of these protocols, end users can remotely control heating of the unit, including temperature increase, decrease and power on and off, as well as basic monitoring such as temperature setpoint, actual heater/thermistor temperature, power output percentage and controller status.

As part of the Next Generation electronics, is the introduction of one temperature controller on a state of the art PCB. The unit will still ship factory set to one of the four available temperature ranges for accurate manual setting. When controlled through one of the new bus options, the user will be able to remotely control temperature throughout the complete temperature range of 55°F (13°C) to 380°F (194°C).

Also integrated into the new PCB controller are LED's that indicate status and a modular connection to the heater/thermistor. The modular connector makes for quicker and error proof changing and maintaining of the heater/thermistor. Please contact your local Crane / GO Regulator representative for more information.



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

<b>CONSTRUCTION</b>	316L stainless steel
<b>OUTLET PRESSURES</b>	0-10, 0-25, 0-50, 0-100, 0-250, 0-500, 0-750 and 0-1000 psig
<b>INLET PRESSURE</b>	up to 6000 psig at 380° F (193° C)
<b>HEATING CAPACITY RANGES (IN WATTS)</b>	50, 100, 150, 200 and 250
<b>C<sub>v</sub> COEFFICIENTS</b>	0.06, 0.025, 0.2
<b>CERTIFICATIONS</b>	CSA certification # LR-82566-5 ATEX Directive 2014/34/EU Certification # TRLO3ATEX11001X

### Features & Benefits

- Optional HASTELLOY® C and MONEL®
- 316L stainless steel 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
- Control box complies with NEMA 4 Class 1 Div. 1 and IP66

# HPR-2 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://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](http://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 Ceramic Filled 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)
Ceramic Filled 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)

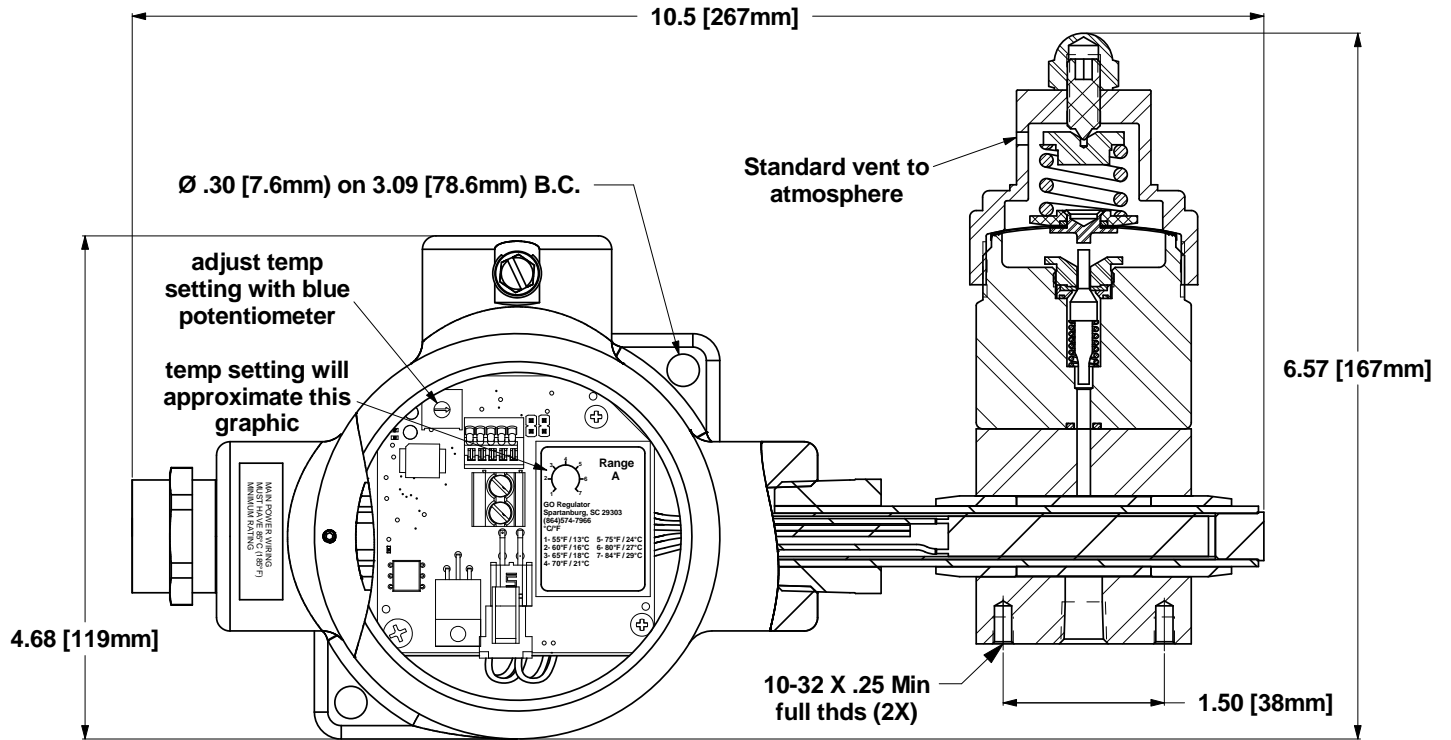
### HPR-2 Electric 1-piece Assembly

(Integral heater block and regulator)

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel® & Ceramic Filled 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)

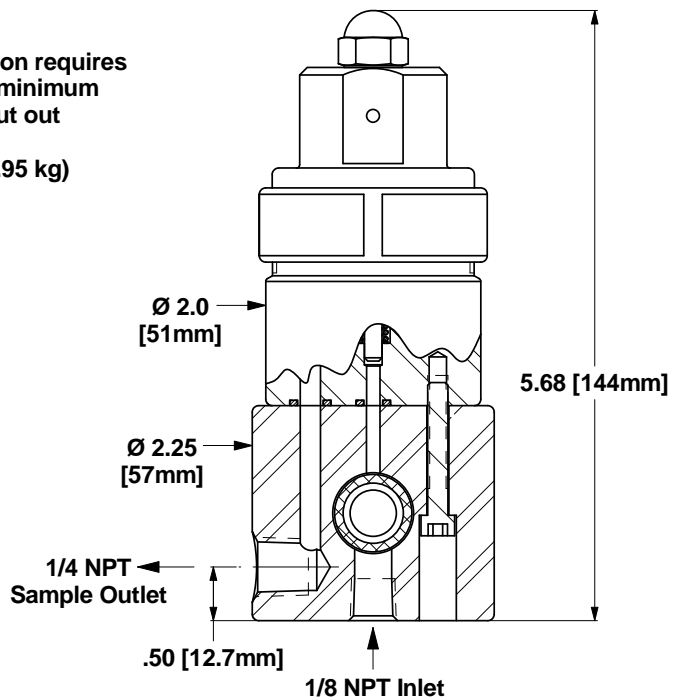
# HPR-2 Series

## Outline & Mounting Dimensions



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

Weight 8.7 lbs (3.95 kg)





## 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.



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

<b>CONSTRUCTION</b>	316L stainless steel
<b>OUTLET PRESSURES</b>	0-10, 0-25, 0-50, 0-100, 0-250, 0-500, 0-750 and 0-1000 psig
<b>INLET PRESSURE</b>	up to 6000 psig at 380° F (193° C)
<b>OPERATING TEMPERATURE</b>	up to 500° F (260° C)
<b>C<sub>v</sub> COEFFICIENTS</b>	0.06, 0.025, 0.2
<b>INLET CONNECTIONS</b>	½" FNPT
<b>OUTLET CONNECTIONS</b>	¼" FNPT

### Features & Benefits

- Optional HASTELLOY® C and MONEL®
- 316L stainless steel 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.
- INCONEL® diaphragm standard.



# HPR-2XW Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://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](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**H2 - 1 Z 5 5 Q 3 1 2 1 1 4**

### 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** **Standard**  
For more configurations, see pages 38-45

### TEMPERATURE RANGE / HEATING TYPE

- 5** **Steam**

### HEATER WATTAGE

- 5** **Steam**

### SEAT MATERIAL

- A** Tefzel®
- B** Ceramic Filled 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

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

- 2** **Steam, 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
- W** 0–750 psig
- K** 0–1000 psig (BP-6 topworks)

*NOTE: Contact the factory for any additional requirements.*

## Maximum Temperature & Operating Inlet Pressures

### HPR-2XW Steam 2-piece Assembly

(Heater block and regulator body separate)

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®, Ceramic Filled PTFE, & PCTFE	Up to 380° F (193° C)	@	400 psig (2.76 MPa)
PEEK™	Up to 500° F (260° C)	@	3600 psig (24.82 MPa)

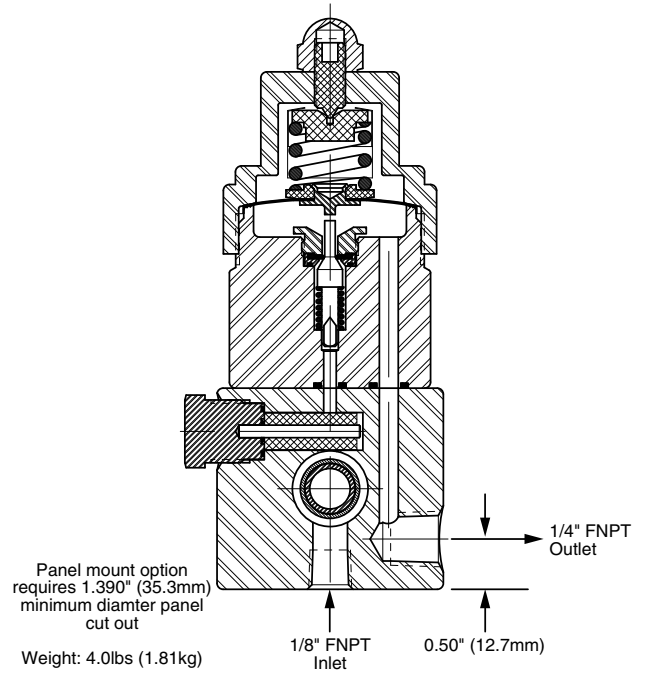
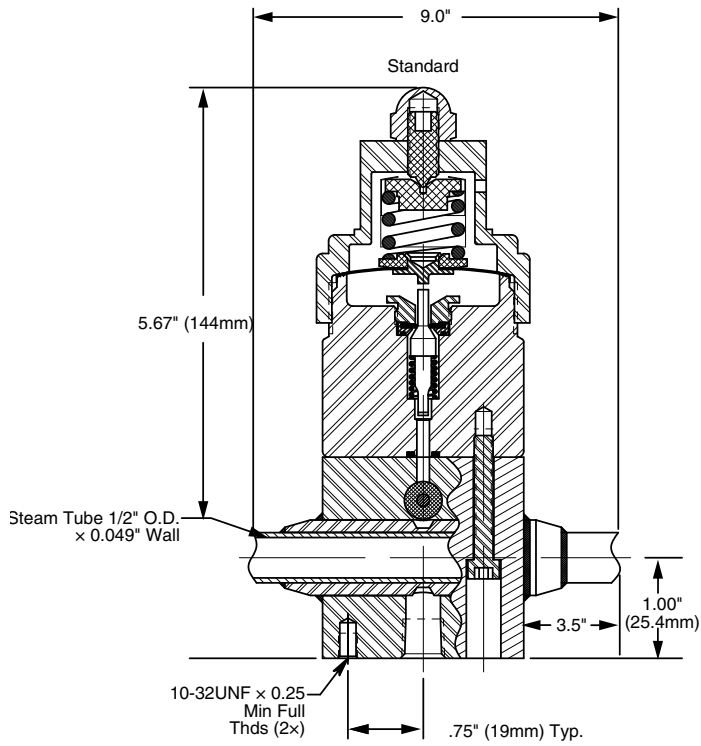
### HPR-2XW Steam 1-piece Assembly

(Integral heater block and regulator)

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®, Ceramic Filled PTFE, & PCTFE	Up to 380° F (193° C)	@	400 psig (2.76 MPa)
PEEK™	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

# HPR-2XW Series

## Outline & Mounting Dimensions



## HPR-2XW Series "Next Generation"

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.

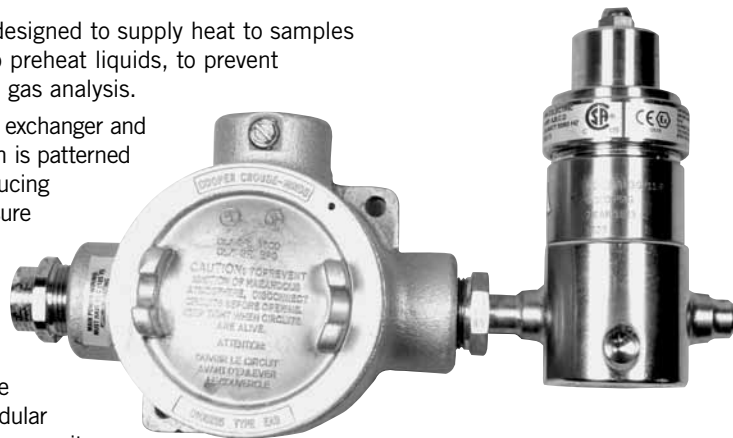
The modular design of the HPR-2XW consists of heat exchanger and pressure control sections. The pressure control section is patterned after the time-proven design of the PR-1 pressure reducing regulator and provides the same excellent outlet pressure stability. The heat exchanger section is made up of 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. This feature enables the unit to boast a T3 rating with up to 250 watts of power. (CSA T2D rating for 250W). Now available is the Next Generation electronics in all GO Regulator electrically heated regulators. In addition to quicker heating and more stable set temperatures, is the ability to remotely control and monitor the unit utilizing the new CANbus/Modbus feature. By utilizing one of these protocols, end users can remotely control heating of the unit, including temperature increase, decrease and power on and off, as well as basic monitoring such as temperature setpoint, actual heater/thermistor temperature, power output percentage and controller status.

As part of the Next Generation electronics, is the introduction of one temperature controller on a state of the art PCB. The unit will still ship factory set to one of the four available temperature ranges for accurate manual setting. When controlled through one of the new bus options, the user will be able to remotely control temperature throughout the complete temperature range of 55°F (13°C) to 380°F (194°C).

Also integrated into the new PCB controller are LED's that indicate status and a modular connection to the heater/thermistor. The modular connector makes for quicker and error proof changing and maintaining of the heater/thermistor. Please contact your local Crane / GO Regulator representative for more information.



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

<b>CONSTRUCTION</b>	316L stainless steel
<b>OUTLET PRESSURES</b>	0-10, 0-25, 0-50, 0-100, 0-250, 0-500, 0-750, and 0-1000 psig
<b>OPERATING TEMPERATURE</b>	up to 380° F (193° C)
<b>HEATING CAPACITY RANGES (IN WATTS)</b>	40, 50, 100, 150, 200, and 250
<b>C<sub>v</sub> COEFFICIENTS</b>	0.06, 0.025, 0.2
<b>CERTIFICATIONS</b>	CSA certification # LR-82566-5 ATEX Directive 2014/34/EU Certification # TRLO3ATEX11001X

### Features & Benefits

- Optional HASTELLOY® C-276 & MONEL®
- 316L stainless steel 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 for T3 operation
- INCONEL® diaphragm standard
- Control box complies with NEMA 4 Class 1 Div. 1 and IP66

# HPR-2XW Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://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](http://www.goreg.com/products/matrix/index.htm)

## How to Order

### Standard items in bold

**H2 - 1 Z 2 3 Q 3 E 6 1 1 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)
- 6** No electronics

#### HEATER WATTAGE

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

#### SEAT MATERIAL

- A** Tefzel®
- B** Ceramic Filled 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

- 6** 120 VAC, HPR-2XW
- 7** 230 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
- 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-2XW Electric 2-piece Assembly

(Heater block and regulator body separate)

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
Tefzel®	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
Ceramic Filled PTFE & PCTFE	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)

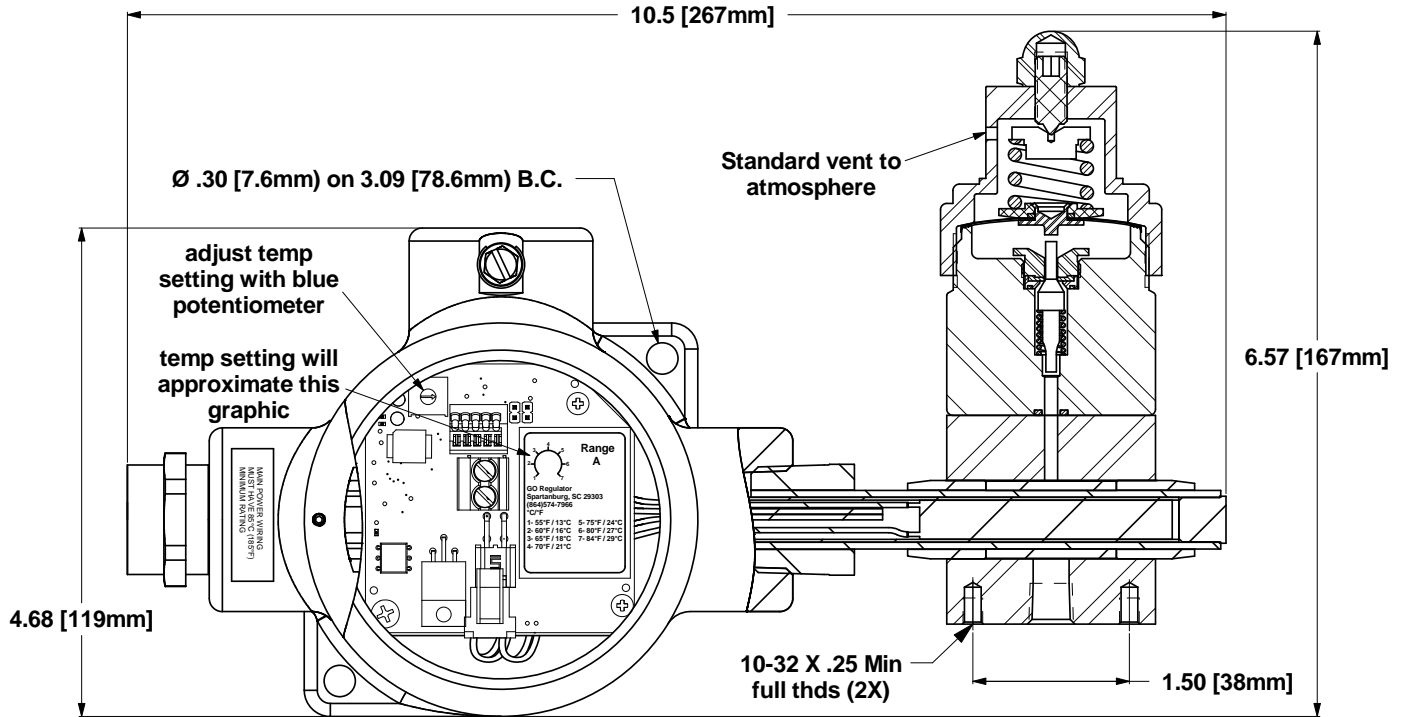
### HPR-2XW Electric 1-piece Assembly

(Integral heater block and regulator)

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

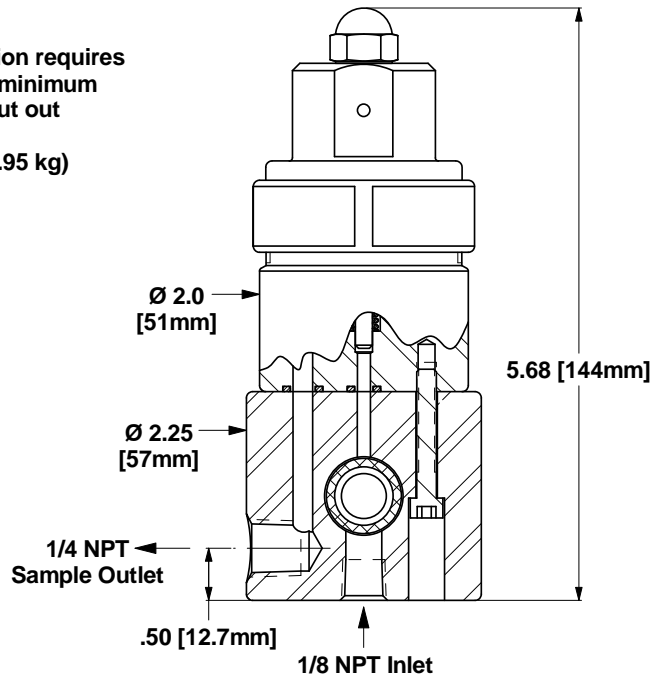
# HPR-2XW Series

## Maximum Temperature & Operating Inlet Pressures



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

Weight 8.7 lbs (3.95 kg)



## 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 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. (CSA T2D rating for 250W)

Now available is the Next Generation electronics in all GO Regulator electrically heated regulators. In addition to quicker heating and more stable set temperatures, is the ability to remotely control and monitor the unit utilizing the new CANbus/Modbus feature. By utilizing one of these protocols, end users can remotely control heating of the unit, including temperature increase, decrease and power on and off, as well as basic monitoring such as temperature setpoint, actual heater/thermistor temperature, power output percentage and controller status.

As part of the Next Generation electronics, is the introduction of one temperature controller on a state of the art PCB. The unit will still ship factory set to one of the four available temperature ranges for accurate manual setting. When controlled through one of the new bus options, the user will be able to remotely control temperature throughout the complete temperature range of 55°F (13°C) to 380°F (194°C).

Also integrated into the new PCB controller are LED's that indicate status and a modular connection to the heater/thermistor. The modular connector makes for quicker and error proof changing and maintaining of the heater/thermistor. Please contact your local Crane / GO Regulator representative for more information.

### 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

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

### Features & Benefits

- HASTELLOY® C-276 and MONEL® optional
- 316L stainless steel 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
- Control box complies with NEMA 4 Class 1 Div. 1 and IP66



pressure regulators

# CV2 Series Cylinder Vaporizer

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://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](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**CV2 – 4 A 1 H 3 1 H 3 E 1 3 2 1 2 1**

*1st Stage                      2nd Stage*

**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 1/8" FNPT
- 1 1/4" FNPT

**SEAT MATERIAL (1ST STAGE)**

- A Tefzel®
- B Ceramic Filled 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 Ceramic Filled PTFE
- H PCTFE
- Q PEEK™

**FLOW COEFFICIENT (CV) (2ND STAGE)**

- C 0.025**
- 3 0.06
- 5 0.2

**OPTIONS**

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

**VOLTAGE**

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

**THERMISTOR TYPE**

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

**CONTROLLER TYPE**

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

**HEATER WATTAGE**

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

**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

**CAP ASSEMBLY (2ND STAGE)**

- 1 **Tamper-proof, stainless steel**
- 4 Tamper-proof, panel mount, stainless steel
- 7 Tamper-proof, captured vent, 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

*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.*

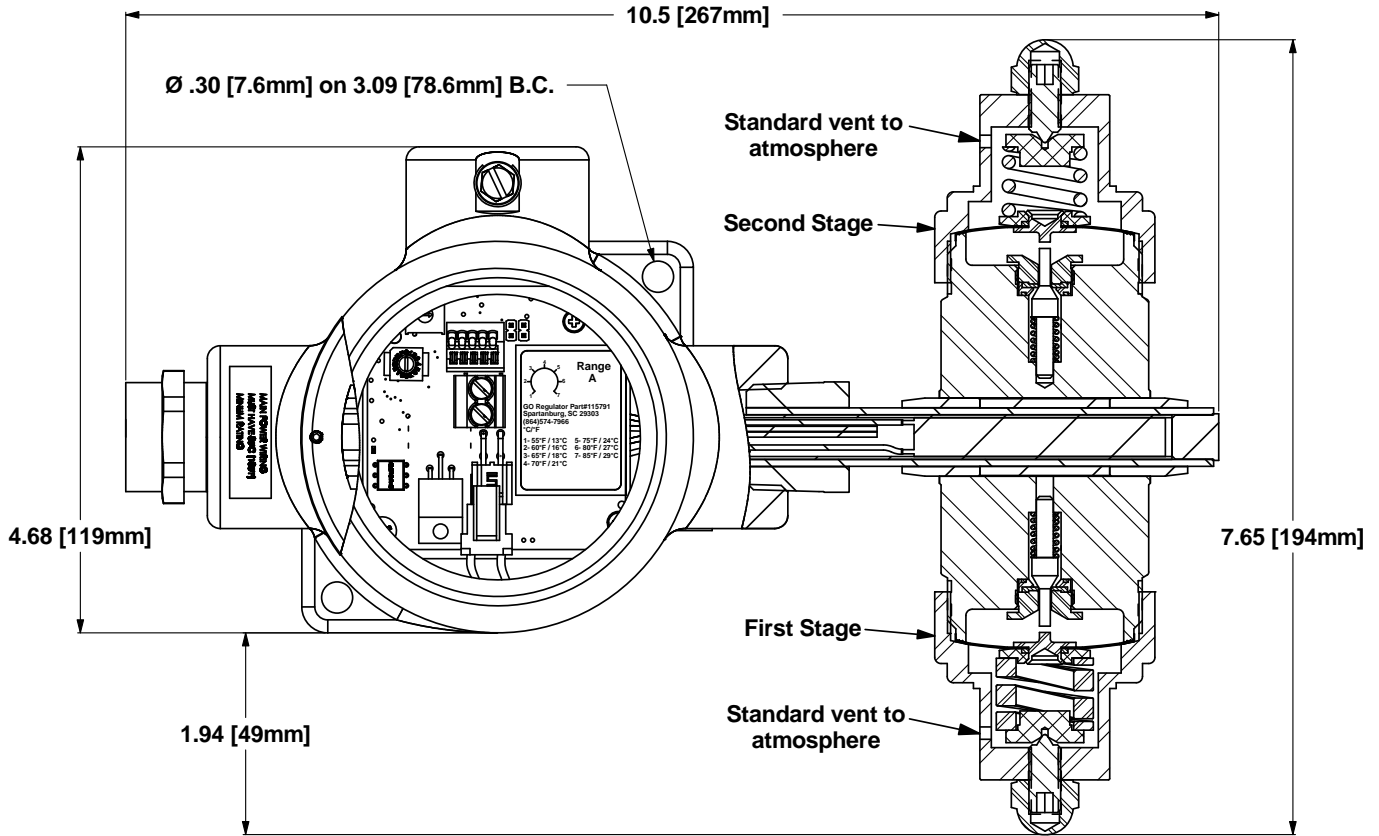
## Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel® & Ceramic Filled 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)



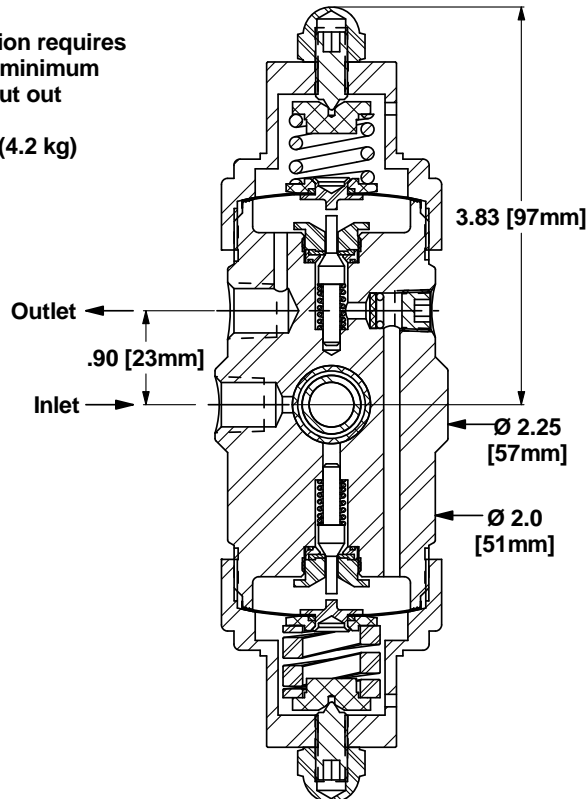
# CV2 Series Cylinder Vaporizer

## Outline and Mounting Dimensions



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

Weight = 9.3 lbs (4.2 kg)



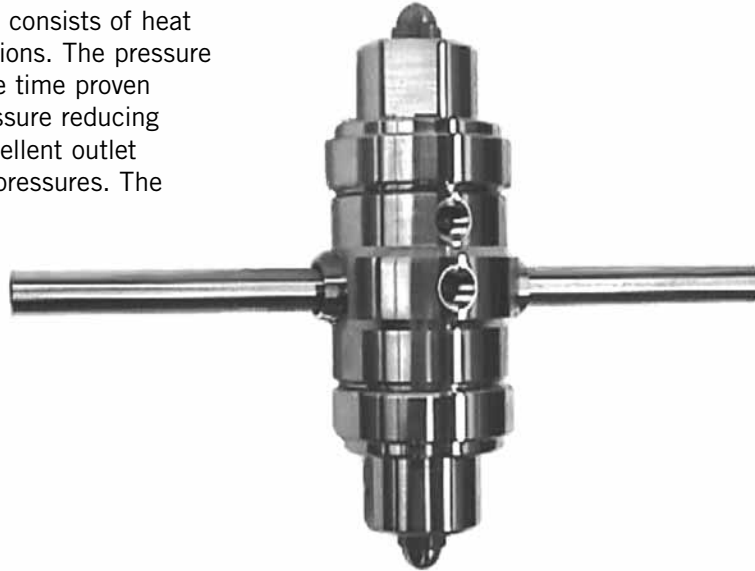
## CV2 Series Cylinder Vaporizer

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.



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

<b>CONSTRUCTION</b>	316L stainless steel
<b>OUTLET PRESSURES</b>	0-10, 0-25, 0-50, 0-100, 0-250, and 0-500 psig
<b>OPERATING TEMPERATURE</b>	up to 500° F (260° C)
<b>C<sub>v</sub> COEFFICIENTS</b>	0.06, 0.025, 0.2

### Features & Benefits

- Optional HASTELLOY® C-276 and MONEL®
- 316L stainless steel 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.
- INCONEL® diaphragm standard

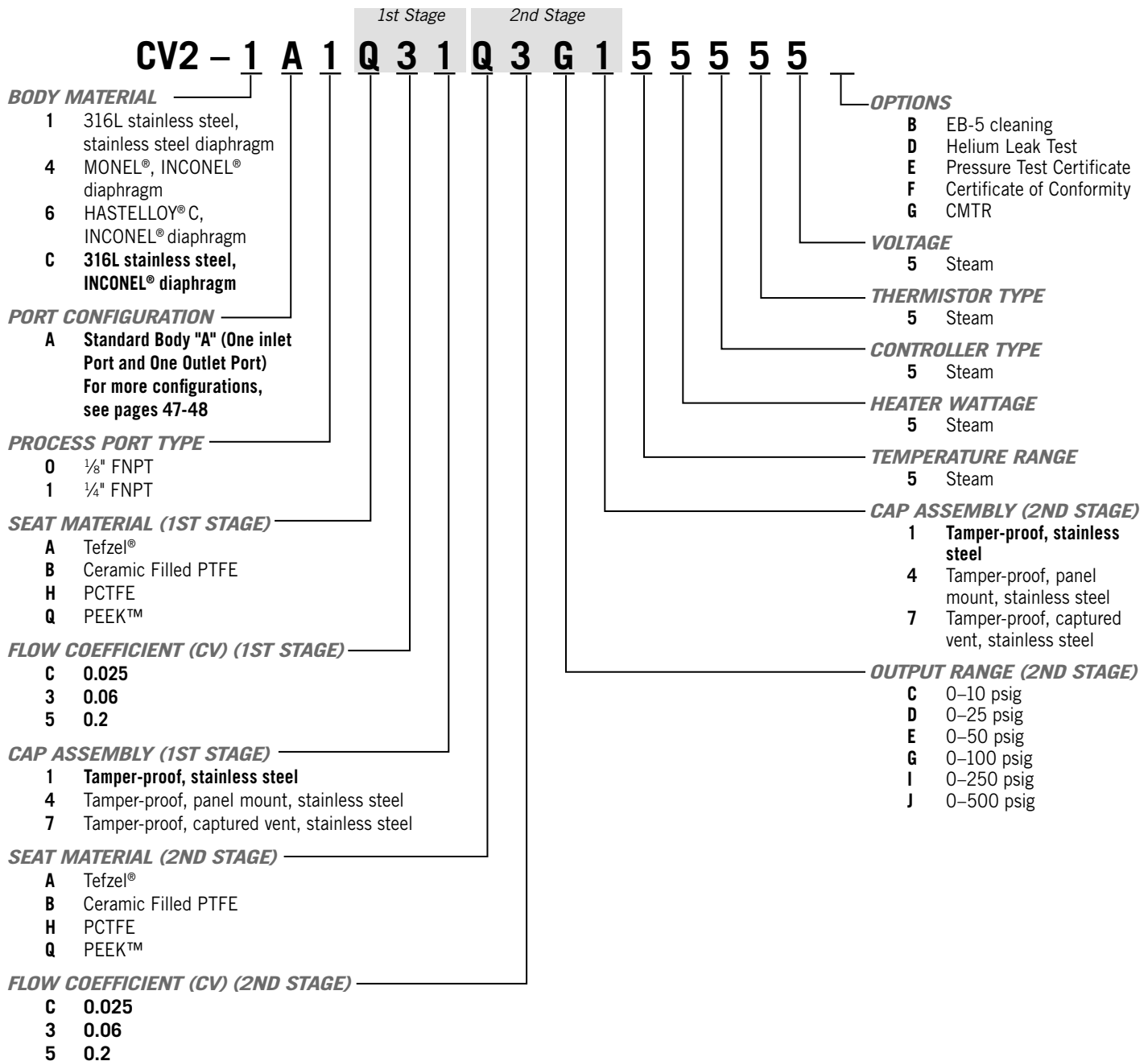
# CV2 Series Cylinder Vaporizer

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://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](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold



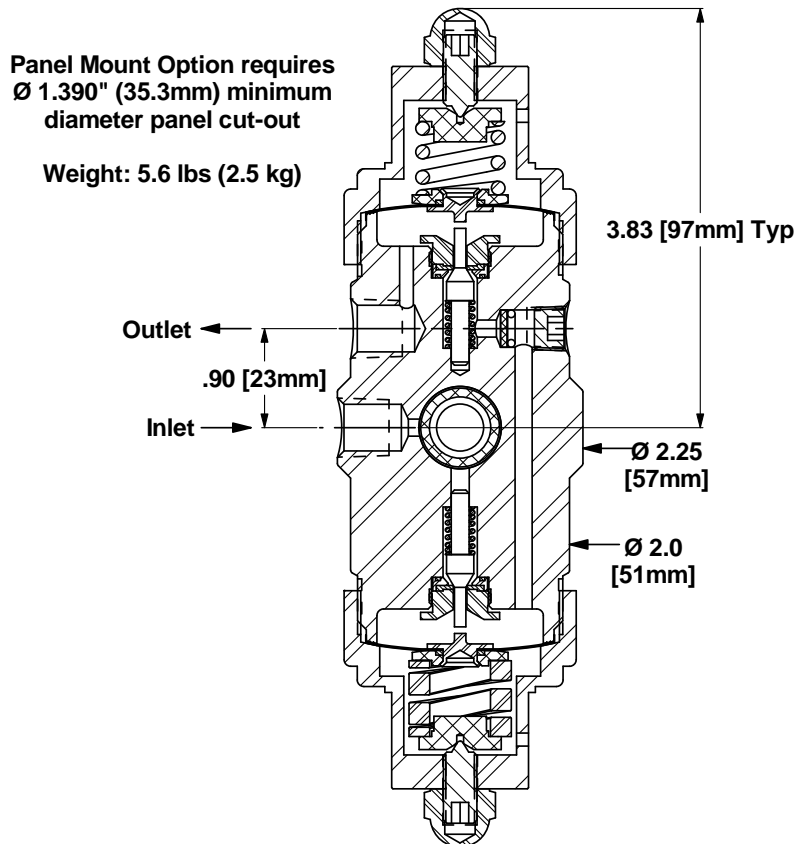
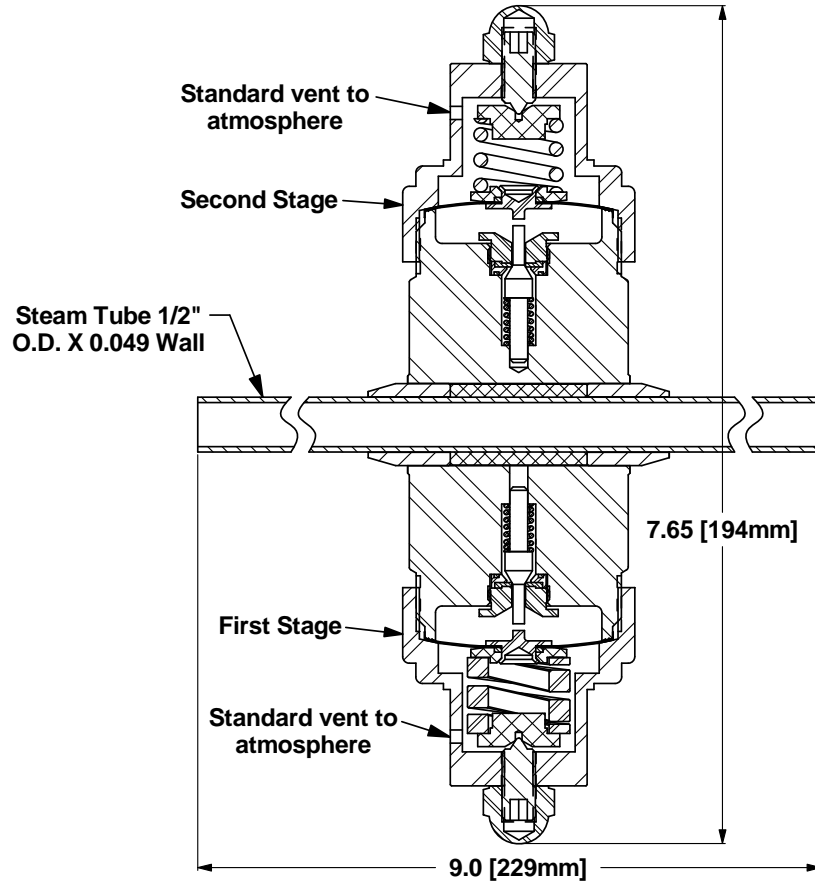
*NOTE: Contact the factory for any additional requirements.*

## Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®, Ceramic Filled PTFE & PCTFE	Up to 380° F (193° C)	@	400 psig (2.76 MPa)
PEEK™	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

# CV2 Series Cylinder Vaporizer

## Outline and Mounting Dimensions



## DH2 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. This feature enables the unit to boast a T3 rating with up to 250 watts of power. (CSA T2D rating)

Now available is the Next Generation electronics in all GO Regulator electrically heated regulators. In addition to quicker heating and more stable set temperatures, is the ability to remotely control and monitor the unit utilizing the new CANbus/Modbus feature. By utilizing one of these protocols, end users can remotely control heating of the unit, including temperature increase, decrease and power on and off, as well as basic monitoring such as temperature setpoint, actual heater/thermistor temperature, power output percentage and controller status.

As part of the Next Generation electronics, is the introduction of one temperature controller on a state of the art PCB. The unit will still ship factory set to one of the four available temperature ranges for accurate manual setting. When controlled through one of the new bus options, the user will be able to remotely control temperature throughout the complete temperature range of 55°F (13°C) to 380°F (194°C).

Also integrated into the new PCB controller are LED's that indicate status and a modular connection to the heater/thermistor. The modular connector makes for quicker and error proof changing and maintaining of the heater/thermistor. Please contact your local Crane / GO Regulator representative for more information.

### Typical Applications

#### Analytical process sample conditioning systems:

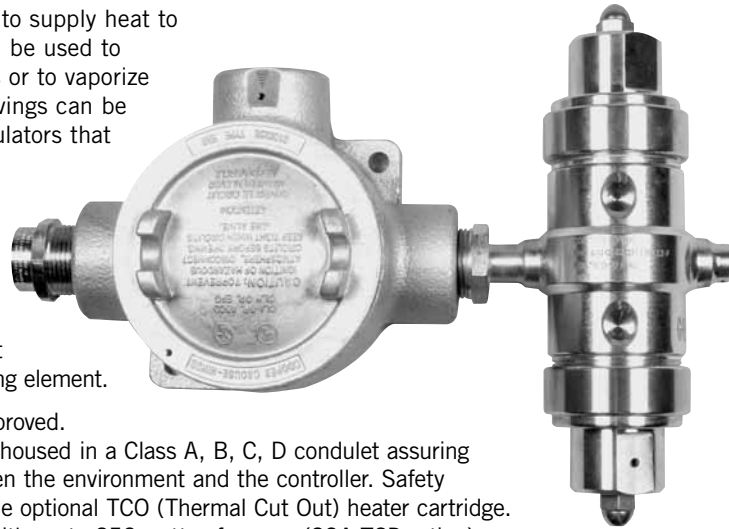
- Petrochemical refineries
- Chemical production facilities
- Pilot plants (chemical & petrochemical)
- LNG loading and off-loading points
- Natural gas pipeline sampling

### Technical Data

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

### Features & Benefits

- Optional HASTELLOY® C-276 and MONEL®
- 316L stainless steel body with better than 25 Ra finish in diaphragm cavity for an optimal sealing surface
- Bubble-tight shutoff
- Available in 120VAC or 230VAC
- Optional TCO heating cartridge for T3 rating
- INCONEL® diaphragm standard
- Control box complies with NEMA 4 Class 1 Div. 1 and IP66



pressure regulators

# DH2 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://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](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**DH2 – 1 A 1 A 3 I 1 A 3 G 1 4 1 1 1 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 on each side.**

For more configurations, see pages 49-51

### PROCESS PORT TYPE

- O 1/8" FNPT (ALL PORTS)**
- 1 1/4" FNPT (ALL PORTS)**

### SEAT MATERIAL (REGULATOR A)

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

### FLOW COEFFICIENT (REGULATOR A)

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

### OUTLET 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**
- K 0–1000 psig, BP-6 Top Works Only**
- W 0–750 psig**

### CAP ASSEMBLY (REGULATOR A)

- 1 Tamper-proof, stainless steel**
- 4 Tamper-proof, panel mount, stainless steel**
- 7 Tamper-proof, captured vent, stainless steel**
- L T-handle, stainless steel, BP-6 Top Works**

### SEAT MATERIAL (REGULATOR B)

- A Tefzel®**
- B Ceramic Filled PTFE**
- H PCTFE (formerly Kel-F® 81)**
- Q PEEK™**

### FLOW COEFFICIENT (REGULATOR B)

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

### OPTIONS

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

### VOLTAGE

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

### THERMISTOR TYPE

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

### CONTROLLER TYPE

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

### HEATER WATTAGE

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

### 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**

### CAP ASSEMBLY (REGULATOR B)

- 1 Tamper-proof, stainless steel**
- 4 Tamper-proof, panel mount, stainless steel**
- 7 Tamper-proof, captured vent, stainless steel**
- L T-handle, stainless steel, BP-6 Top Works**

### 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**
- K 0–1000 psig, BP-6 Top Works Only**
- W 0–750 psig**

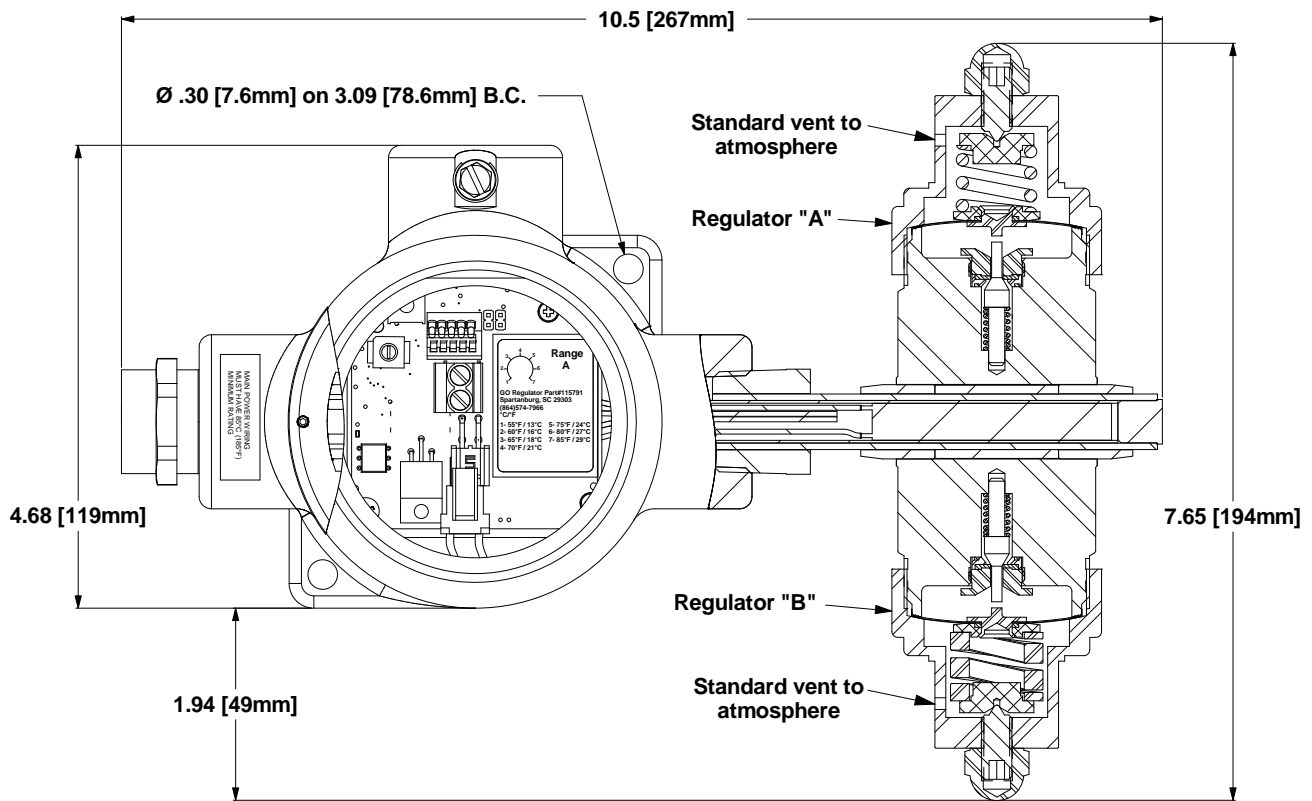
*NOTE: 1. Contact the factory for any additional requirements.  
 2. Units that will be used for flammable liquid or gas with fire point at 200°C or below require the TCO Thermistor. It is also recommended to use the 1-PC body option. In addition, Tefzel and PCTFE seats in these units are recommended 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® & Ceramic Filled 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)

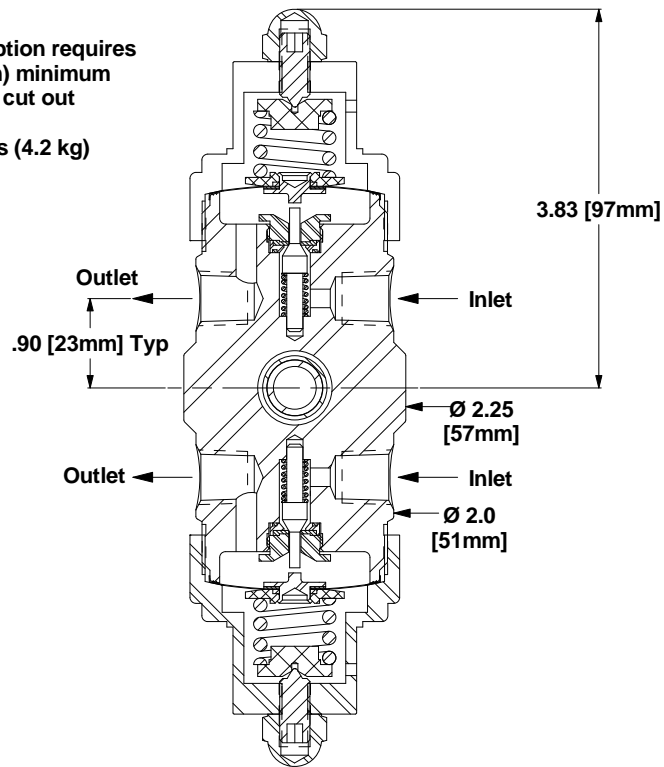
# DH2 Series

## Outline and Mounting Dimensions



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

Weight = 9.3 lbs (4.2 kg)





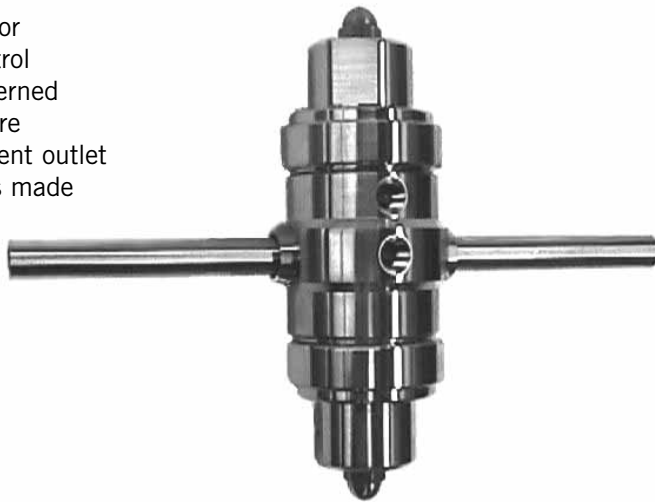
## DH2 Series

Steam 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 a body and a heating 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

<b>CONSTRUCTION</b>	316L stainless steel
<b>OUTLET PRESSURES</b>	0–10, 0–25, 0–50, 0–100, 0–250, 0–500, 0–750, and 0–1000 psig
<b>OPERATING TEMPERATURE</b>	up to 500° F (260° C)
<b>C<sub>v</sub> COEFFICIENTS</b>	0.06, 0.025, 0.2

### Features & Benefits

- Optional HASTELLOY® C-276 and MONEL®
- 316L stainless steel 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
- INCONEL® diaphragm standard

# DH2 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://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](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

*Regulator A*      *Regulator B*

### DH2 - 1 A 1 H 3 J 1 Q 3 E 1 5 5 5 5 5

**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 on each side.**  
 For more configurations, see pages 49-51

**PROCESS PORT TYPE**

O 1/8" FNPT (ALL PORTS)

1 1/4" FNPT (ALL PORTS)

**SEAT MATERIAL (REGULATOR A)**

A Tefzel®

B Ceramic Filled PTFE

H PCTFE

Q PEEK™

**FLOW COEFFICIENT (REGULATOR A)**

C **0.025**

3 **0.06**

5 **0.2**

**OUTLET 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

K 0-1000 psig, BP-6 Top Works Only

W 0-750 psig

**CAP ASSEMBLY (REGULATOR A)**

1 **Tamper-proof, stainless steel**

4 Tamper-proof, panel mount, stainless steel

7 Tamper-proof, captured vent, stainless steel

L T-handle, stainless steel, BP-6 Top Works

**SEAT MATERIAL (REGULATOR B)**

A Tefzel®

B Ceramic Filled PTFE

H PCTFE

Q PEEK™

**FLOW COEFFICIENT (REGULATOR B)**

C **0.025**

3 **0.06**

5 **0.2**

**OPTIONS**

B EB-5 Cleaning

D Helium Leak Test

E Pressure Test Certificate

F Certificate of Conformity

G CMTR

**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

7 Tamper-proof, captured vent, stainless steel

L T-handle, stainless steel, BP-6 Top Works

**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

K 0-1000 psig, BP-6 Top Works Only

W 0-750 psig

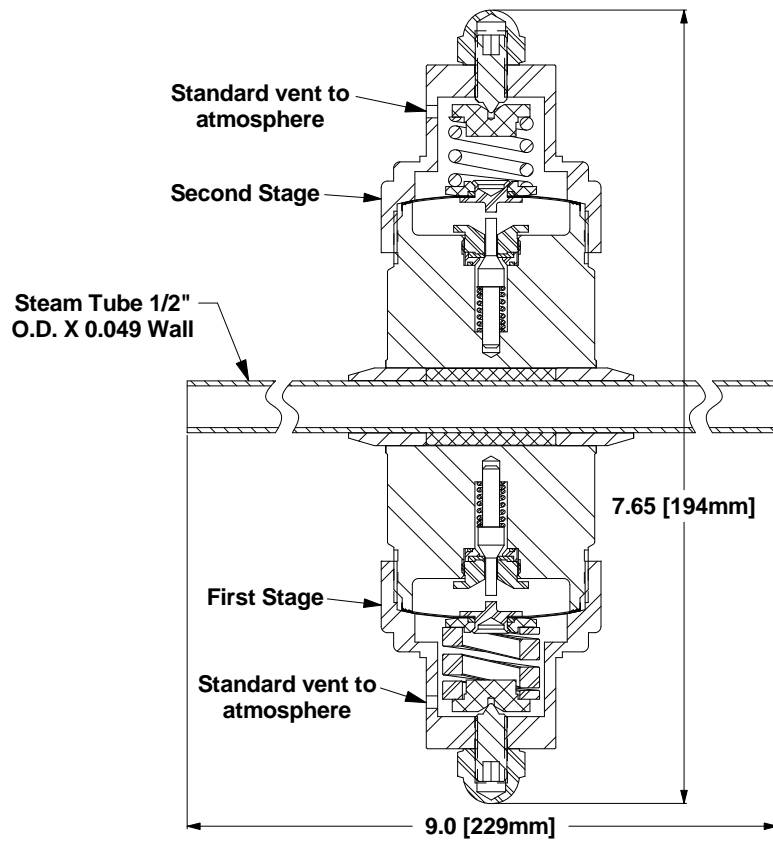
NOTE: Contact the factory for any additional requirements.

## Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®, Ceramic	Up to 380° F (193° C)	@	400 psig (2.76 MPa)
Filled PTFE & PCTFE	(148° C to 193° C)	@	400 psig (2.76 MPa)
PEEK™	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

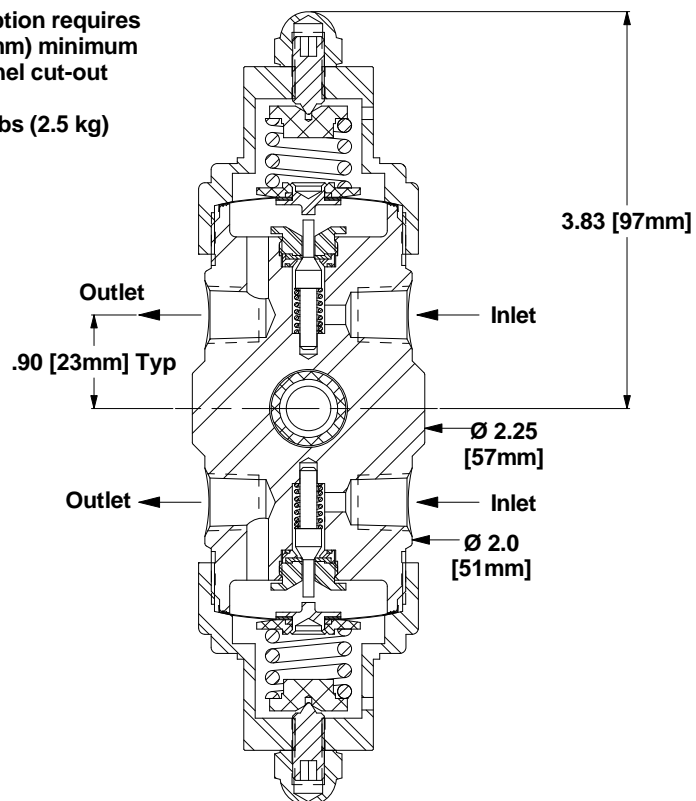
# DH2 Series

## Outline and Mounting Dimensions



Panel Mount Option requires  
Ø 1.390" (35.3mm) minimum  
diameter panel cut-out

Weight: 5.6 lbs (2.5 kg)



## MV-2 Series

Miniature Vaporizing Pressure Regulator

### Introduction

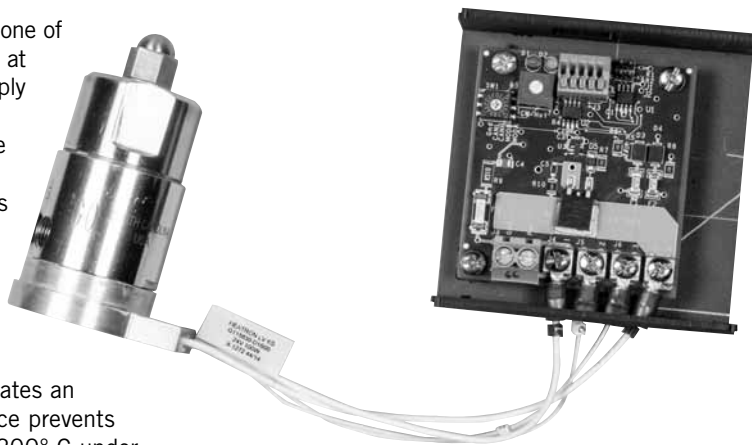
The MV-2 Series Miniature Vaporizing Regulator is one of the smallest envelopes in the industry. Weighing in at a scant 0.86 pounds, the MV-2 is designed to supply heat to samples entering instrumentation systems where space is at a premium and quality cannot be compromised. It can be used to preheat liquids, to prevent condensation of gases or to vaporize liquids prior to gas analysis.

The pressure control section of the MV-2 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-2 Series offers the utmost in unequalled system safety and performance.

Now available is the Next Generation electronics in all GO Regulator electrically heated regulators. In addition to quicker heating and more stable set temperatures, is the ability to remotely control and monitor the unit utilizing the new CANbus/Modbus feature. By utilizing one of these protocols, end users can remotely control heating of the unit, including temperature increase, decrease and power on and off, as well as basic monitoring such as temperature setpoint, actual heater/thermistor temperature, power output percentage and controller status.

As part of the Next Generation electronics, is the introduction of one temperature controller on a state of the art PCB. The unit will still ship factory set to one of the four available temperature ranges for accurate manual setting. When controlled through one of the new bus options, the user will be able to remotely control temperature throughout the complete temperature range of 55°F (13°C) to 380°F (194°C).

Also integrated into the new PCB controller are LED's that indicate status and a modular connection to the heater/thermistor. The modular connector makes for quicker and error proof changing and maintaining of the heater/thermistor. Please contact your local Crane / GO Regulator representative for more information.



pressure regulators

### Typical Applications

#### Analytical process sample conditioning systems:

- Petrochemical refineries
- Chemical production facilities
- Pilot plants (chemical & petrochemical)
- Portable low voltage analyzers

### Technical Data

CONSTRUCTION	316L stainless steel
OUTLET PRESSURES	0-10, 0-25, 0-50, 0-100, 0-250, and 0-500 psig
OPERATING TEMPERATURE	up to 380° F (193° C)
HEATING CAPACITY RANGES (IN WATTS)	40 and 100

### Features & Benefits

- 316L stainless steel 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

# MV-2 Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://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](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**MV2 - 1 A B 2 3 B 3 E H D 1**

**BODY MATERIAL**

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

**PORT CONFIGURATION**

- A** Standard
- For more configurations, see page 46

**PORT TYPE**

- 0** 1/8" FNPT (all ports)
- A** 1/16" FNPT (all ports)
- B** 1/8" FNPT inlets; 1/16" FNPT outlets

**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)
- 0** No electronics

**HEATER WATTAGE**

- 1** **40W**
- 2** **40W with thermal cutout (TCO)**
- 3** 100W
- 4** 100W with thermal cutout (TCO)
- 0** No electronics

**HEATER VOLTAGE**

- B** **12 VDC**
- C** **24 VDC**
- 0** No electronics

**OPTIONS (NOT REQUIRED)**

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

**CAP STYLE**

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

**CAVITY O-RING MATERIAL**

- D** **Viton®**
- I** PTFE

**SEAT MATERIAL**

- A** Tefzel®
- H** PCTFE
- 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

*NOTE: Contact the factory for any additional requirements.*

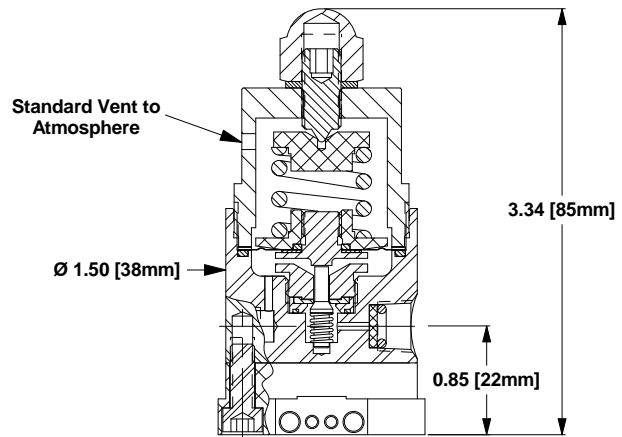
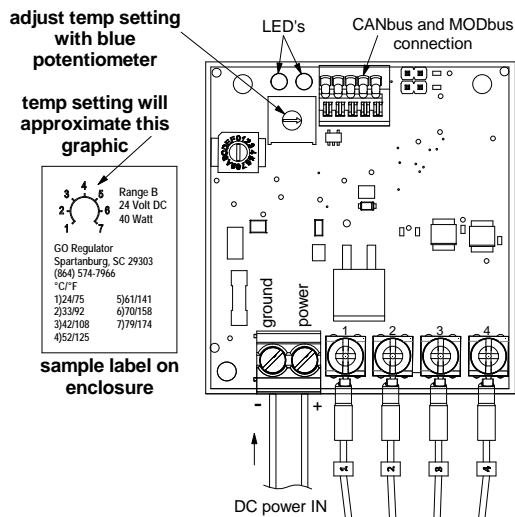
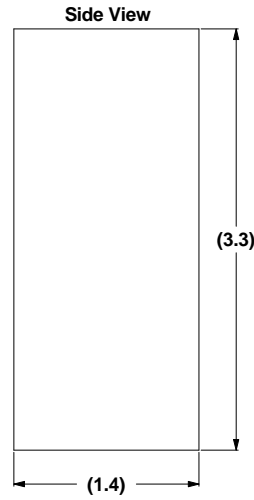
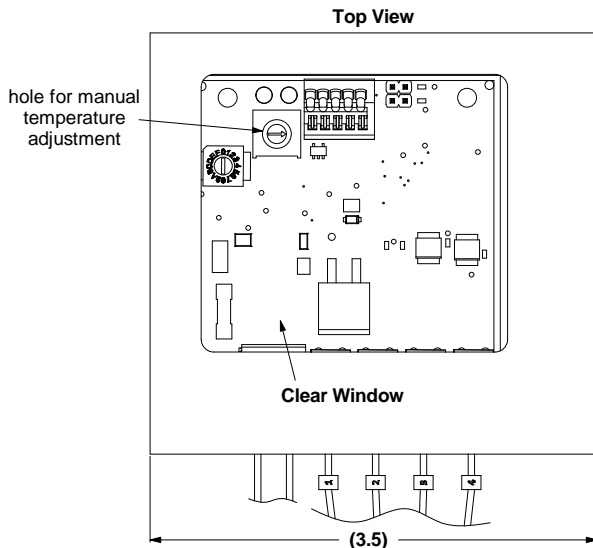
## Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel® & PCTFE	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)
PEEK™	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)

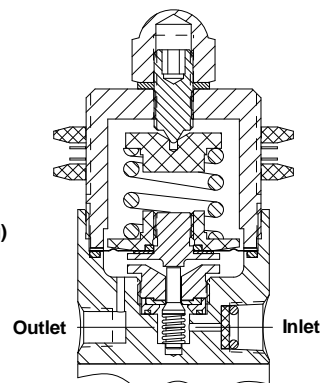
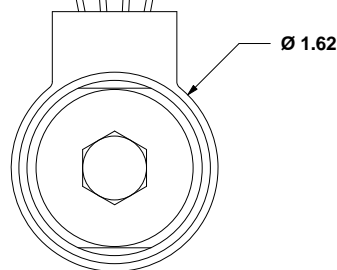
# MV-2 Series

## Outline and Mounting Dimensions

### Removeable PCB Enclosure



Weight = 0.86 lbs (.39 kg)



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

## HXR Series

Insitu Temperature Compensating Pressure Regulator

### 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.



pressure regulators

### Typical Applications

#### Analytical process sample conditioning systems:

- Gas pipelines

### Technical Data

CONSTRUCTION	316L stainless steel
OUTLET PRESSURES	0-10, 0-25, 0-50, 0-100, 0-250, and 0-500 psig
MAX. INLET WORKING PRESSURE AT MAX. TEMP.	3600 psig
C <sub>v</sub> COEFFICIENTS	0.025

### 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
- 316L stainless steel body with better than 25 Ra finish in diaphragm cavity
- Bubble-tight shutoff
- Available in 3/4" MNPT probe gland connection
- 70 micron filter
- Port sizes & configuration 1/4" FNPT: 3 low pressure ports situated 90° apart
- Optional probe lengths available
- Optional gauge



# HXR Series

To Order, contact your local Distributor Link below:  
[www.goreg.com/distributor/index.htm](http://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](http://www.goreg.com/products/matrix/index.htm)

## How to Order

Standard items in bold

**HXR - 1 1 1 C 1 D 1 6 1 1**

**BODY MATERIAL**

**1** 316L stainless steel

**OPTIONAL PORTING TYPES**

**1** ¼" FNPT

**SURFACE FINISH OF DIAPHRAGM CAVITY**

**1** < 25 Ra

**SEAT MATERIAL**

**A** Tefzel®  
**C** Polyimide

**MOUNTING THREAD**

**1** ¾" MNPT

**OPTIONS (NOT REQUIRED)**

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

**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**

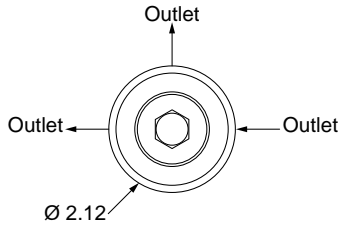
**C** 0-10 psig  
**D** 0-25 psig  
**E** 0-50 psig  
**G** 0-100 psig  
**I** 0-250 psig  
**J** 0-500 psig

*NOTE: Contact the factory for any additional requirements.*

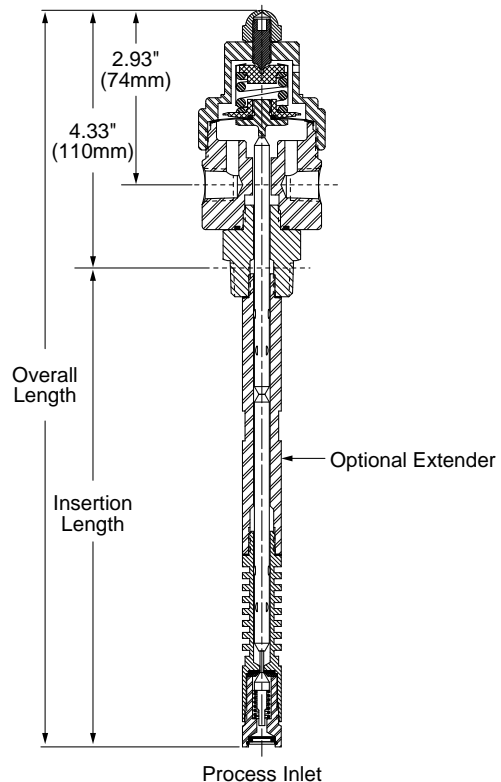
## Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	150° F (66° C)	@	3600 psig (20.68 MPa)
Polyimide	500° F (260° C)	@	3600 psig (20.68 MPa)

## Outline and Mounting Dimensions



EXTENDER	INSERTION LENGTH	OVERALL LENGTH
None (-0)	3.7"	8.45"
Short (-1)	7.8"	12.45"
Long (-2)	11.0"	15.75"



## LNG Series

Sample Vaporizer

### 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.

Now available is the Next Generation electronics in all GO Regulator electrically heated regulators. In addition to quicker heating and more stable set temperatures, is the ability to remotely control and monitor the unit utilizing the new CANbus/Modbus feature. By utilizing one of these protocols, end users can remotely control heating of the unit, including temperature increase, decrease and power on and off, as well as basic monitoring such as temperature setpoint, actual heater/thermistor temperature, power output percentage and controller status.

As part of the Next Generation electronics, is the introduction of one temperature controller on a state of the art PCB. The unit will still ship factory set to one of the four available temperature ranges for accurate manual setting. When controlled through one of the new bus options, the user will be able to remotely control temperature throughout the complete temperature range of 55°F (13°C) to 380°F (194°C).

Also integrated into the new PCB controller are LED's that indicate status and a modular connection to the heater/thermistor. The modular connector makes for quicker and error proof changing and maintaining of the heater/thermistor. Please contact your local Crane / GO Regulator representative for more information.

### Typical Applications

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

### Technical Data – Steam Heated

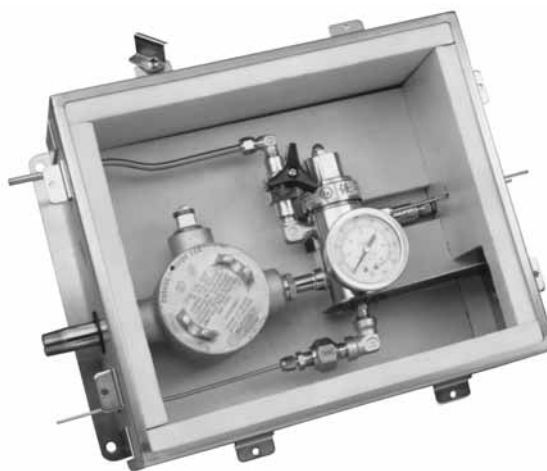
<b>CONSTRUCTION</b>	316L stainless steel
<b>OUTLET PRESSURES</b>	0–10, 0–25, 0–50, 0–100, 0–250, and 0–500 psig
<b>INLET PRESSURE</b>	up to 3600 psig at 380° F (193° C)
<b>OPERATING TEMPERATURE</b>	up to 500 F (260° C)
<b>INLET CONNECTIONS</b>	½" FNPT
<b>OUTLET CONNECTIONS</b>	¼" FNPT

### Features & Benefits

- Optional HASTELLOY® C-276 and MONEL®
- 316L stainless steel 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 and steam-heated
- Optional TCO heating cartridge for T3 operation
- INCONEL® diaphragm standard

### Technical Data – Electrically Heated

<b>CONSTRUCTION</b>	316L stainless steel
<b>OUTLET PRESSURES</b>	0–10, 0–25, 0–50, 0–100, 0–250, and 0–500 psig
<b>INLET PRESSURE</b>	up to 3600 psig at 380° F (193° C)
<b>HEATING CAPACITY RANGES (IN WATTS)</b>	40, 50, 100, and 150
<b>CERTIFICATIONS</b>	CSA certification # LR-82566-5 ATEX Directive 2014/34/EU Certification # TRLO3ATEX11001X



pressure regulators

## How to Order

Standard items in bold

### LNG – 102830

**A 2 3 3 1 2 2**

#### BASIC PART NUMBER

- 102830** 0–10 psig electronically heated, s.s diaphragm
- 102831** 0–25 psig electronically heated, s.s diaphragm
- 102832** 0–50 psig electronically heated, s.s diaphragm
- 102833** 0–100 psig electronically heated, s.s diaphragm
- 102834** 0–250 psig electronically heated, s.s diaphragm
- 102835** 0–500 psig electronically heated, s.s diaphragm
- 109551** 0–25 psig steam heated, s.s diaphragm
- 109552** 0–50 psig steam heated, s.s diaphragm
- 109553** 0–100 psig steam heated, s.s diaphragm
- 109554** 0–250 psig steam heated, s.s diaphragm
- 109555** 0–500 psig steam heated, s.s diaphragm
- 103680** 0–10 psig electronically heated, INCONEL® diaphragm
- 103681** 0–25 psig electronically heated, INCONEL® diaphragm
- 103682** 0–50 psig electronically heated, INCONEL® diaphragm
- 103683** 0–100 psig electronically heated, INCONEL® diaphragm
- 103684** 0–250 psig electronically heated, INCONEL® diaphragm
- 103685** 0–500 psig electronically heated, INCONEL® diaphragm
- 109561** 0–25 psig steam heated, INCONEL® diaphragm
- 109562** 0–50 psig steam heated, INCONEL® diaphragm
- 109563** 0–100 psig steam heated, INCONEL® diaphragm
- 109564** 0–250 psig steam heated, INCONEL® diaphragm
- 109565** 0–500 psig steam heated, INCONEL® diaphragm

#### SEAT MATERIAL

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

#### WATTAGE

- 1** 40 watts
- 2** 50 watts
- 3** 100 watts
- 4** 150 watts
- 5** Steam heated
- 8** 200 watts
- 9** 250 watts

#### OPTIONS

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

#### THERMISTOR TYPE

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

#### CONTROLLER TYPE

- 1** **Standard**
- 2** **Standard**
- 5** **Steam**

#### CONFIGURATION

- 1** **Standard enclosure (painted steel)**
- 2** Stainless steel enclosure
- 3** Standard enclosure, all 1/4" tube
- 4** Stainless steel enclosure, all 1/4" tube
- 5** Standard enclosure, 1/4" tube bulkhead
- 6** Stainless steel enclosure, 1/4" tube bulkhead

#### HEATER BLOCK TYPE

- 1** **Steam**
- 2** Steam, HPR-2XW
- 3** **120 VAC**
- 4** **230 VAC**
- 6** 120 VAC, HPR-2XW
- 7** 230 VAC, HPR-2XW

#### 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)
- 5** **Steam heated**

*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

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

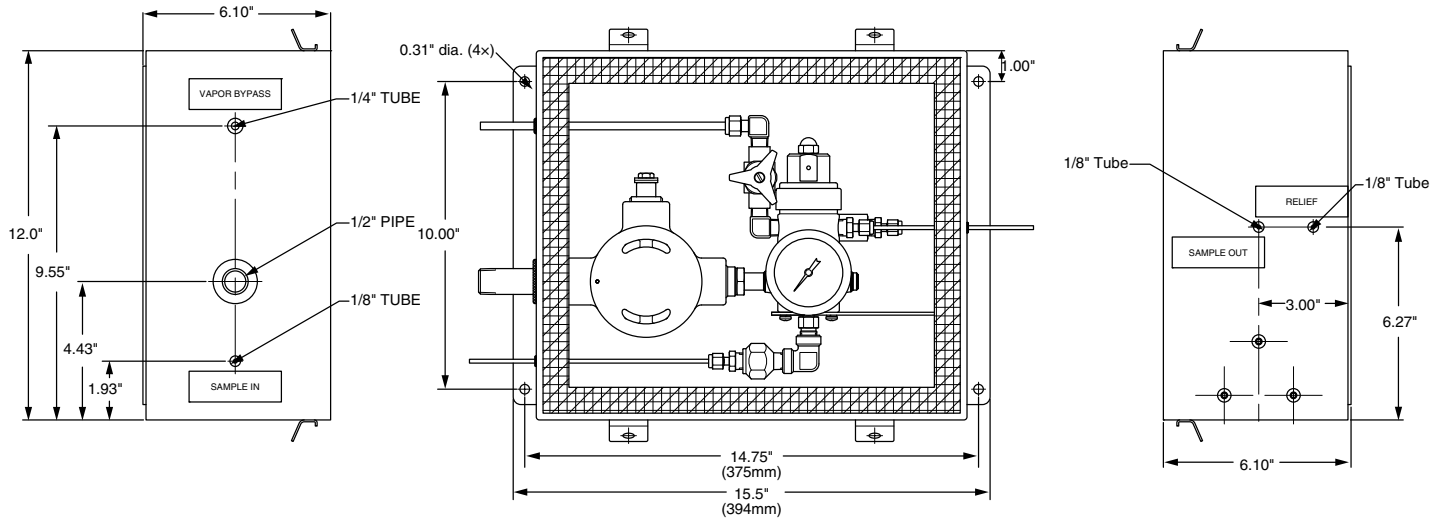
### HPR-2 Steam

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®, Ceramic Filled PTFE & PCTFE	Up to 380° F (193° C)	@	400 psig (2.76 MPa)
PEEK™	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)

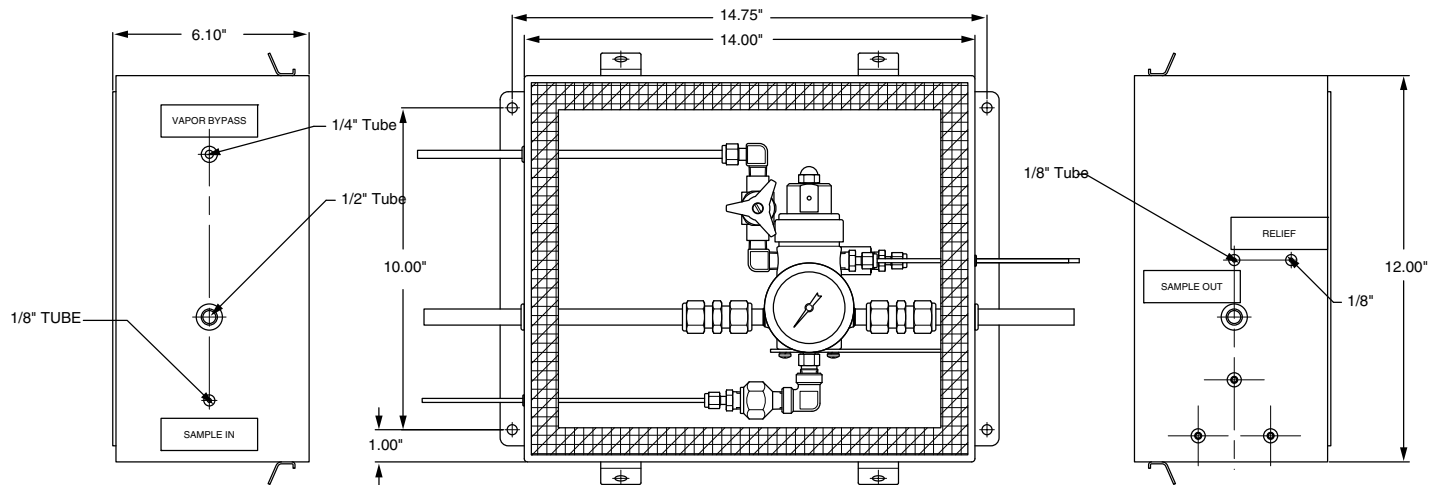
# LNG Series

## Outline & Mounting Dimensions

### Electrical



### Steam



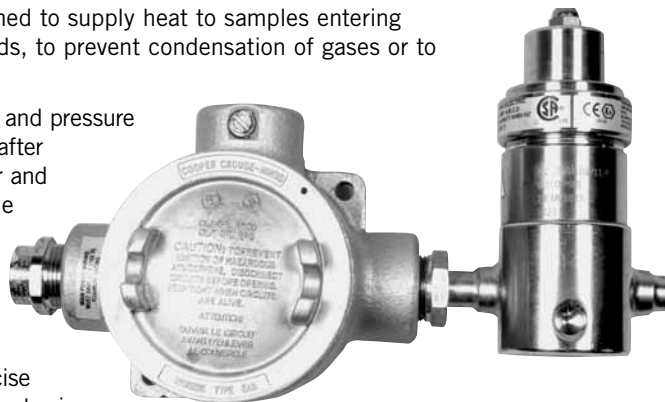
## HBP Series

Electrically Heated Back Pressure Regulators

### Introduction

The HBP Series heated back 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 HBP consists of heat exchanger and pressure control sections. The pressure control section is patterned after the time proven design of the BP-3 back pressure regulator and provides the same excellent upstream pressure stability. The heat exchanger section is made up of a body and heat exchange element and is based on the time proven design of the HPR-2 vaporizing regulator. 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 just prior to exiting the regulator.



The HBP Series of vaporizing back pressure 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 (CSA rated T2D watt heater).

Now available is the Next Generation electronics in all GO Regulator electrically heated regulators. In addition to quicker heating and more stable set temperatures, is the ability to remotely control and monitor the unit utilizing the new CANbus/Modbus feature. By utilizing one of these protocols, end users can remotely control heating of the unit, including temperature increase, decrease and power on and off, as well as basic monitoring such as temperature setpoint, actual heater/thermistor temperature, power output percentage and controller status.

As part of the Next Generation electronics, is the introduction of one temperature controller on a state of the art PCB. The unit will still ship factory set to one of the four available temperature ranges for accurate manual setting. When controlled through one of the new bus options, the user will be able to remotely control temperature throughout the complete temperature range of 55°F (13°C) to 380°F (194°C).

Also integrated into the new PCB controller are LED's that indicate status and a modular connection to the heater/thermistor. The modular connector makes for quicker and error proof changing and maintaining of the heater/thermistor. Please contact your local Crane / GO Regulator representative for more information.

### 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

<b>CONSTRUCTION</b>	316L stainless steel
<b>CONTROL PRESSURES</b>	0-10, 0-25, 0-50, 0-100, 0-250, 0-500, 0-750 and 0-1000 psig
<b>HEATING CAPACITY RANGES (IN WATTS)</b>	50, 100, 150, 200 and 250
<b>C<sub>v</sub> COEFFICIENT</b>	0.2, others available
<b>CERTIFICATIONS</b>	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
- Control box complies with NEMA 4 Class 1 Div. 1 and IP66

pressure regulators

## How to Order

Standard items in bold

**HBP - 4 Z 3 3 Q 3 G 4 1 4 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** A Style
- B** B Style
- C** C Style
- D** D Style
- G** G Style
- L** L Style
- M** M Style
- N** N Style
- P** P Style
- V** V Style
- W** W Style
- X** X Style
- Y** Y Style
- Z** Z Style

For more configurations, see pages 38

### 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)
- 5** Steam
- 8** No electronics

### HEATER WATTAGE

- 1** 40W
- 2** 50W
- 3** 100W
- 4** 150W (TCO Thermistor must be selected in the "Options" box)
- 6** No electronics
- 8** 200W (TCO Thermistor must be selected in the "Options" box)
- 5** Steam
- 9** 250W

### ACTUATOR MATERIAL

- B** Ceramic Filled PTFE
- C** Polyimide
- D** Viton®
- I** High Density PTFE
- K** Kalrez®
- Q** PEEK™

### FLOW COEFFICIENT (Cv)

- 1** **0.03**
- 3** **0.06**
- 5** **0.20 (Standard)**
- 6** **0.24**
- 7** **0.30**
- C** **0.025**
- E** **0.04**
- I** **0.005**

*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.*

### OTHER OPTIONS

- B** EB5 cleaning
- D** Helium leak test
- E** Pressure test certificate
- F** Certificate of Conformity
- G** CMTR
- P** PEEK™ Diaphragm Liner

### OPTIONS

- 1** TCO Thermistor
- 2** TCO Thermistor with 1-Piece Body
- 3** 1-Piece Body
- 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, stainless steel

### HEATER BLOCK PORTING

- 1** **Standard block (1/4" NPT Inlet, 1/8" NPT Outlet)**
- 4** Reverse block
- B** **Standard block with 1/4" NPT Outlet**

### HEATER BLOCK TYPE

- 1** Steam
- 2** Steam XW
- 3** **120 VAC**
- 4** **230 VAC**
- 5** No electronics
- 6** 120 VAC XW
- 7** 230 VAC XW

### CONTROL RANGE

- C** 0-10 psig (0-0.69 bar) (0-69 kpa)
- D** 0-25 psig (0-1.72 bar) (0-172 kpa)
- E** 0-50 psig (0-3.45 bar) (0-345 kpa)
- G** 0-100 psig (0-6.90 bar) (0-690 kpa)
- I** 0-250 psig (0-17.24 bar) (0-1724 kpa)
- J** 0-500 psig (0-34.50 bar) (0-3450 kpa)
- K** 0-1000 psig (BP-6 Top Works must be selected)
- W** 0-750 psig (0-51.80 bar) (0-5180 kpa)

## Maximum Temperature & Operating Inlet Pressures

### HBP Electric, 1 & 2-Piece Body

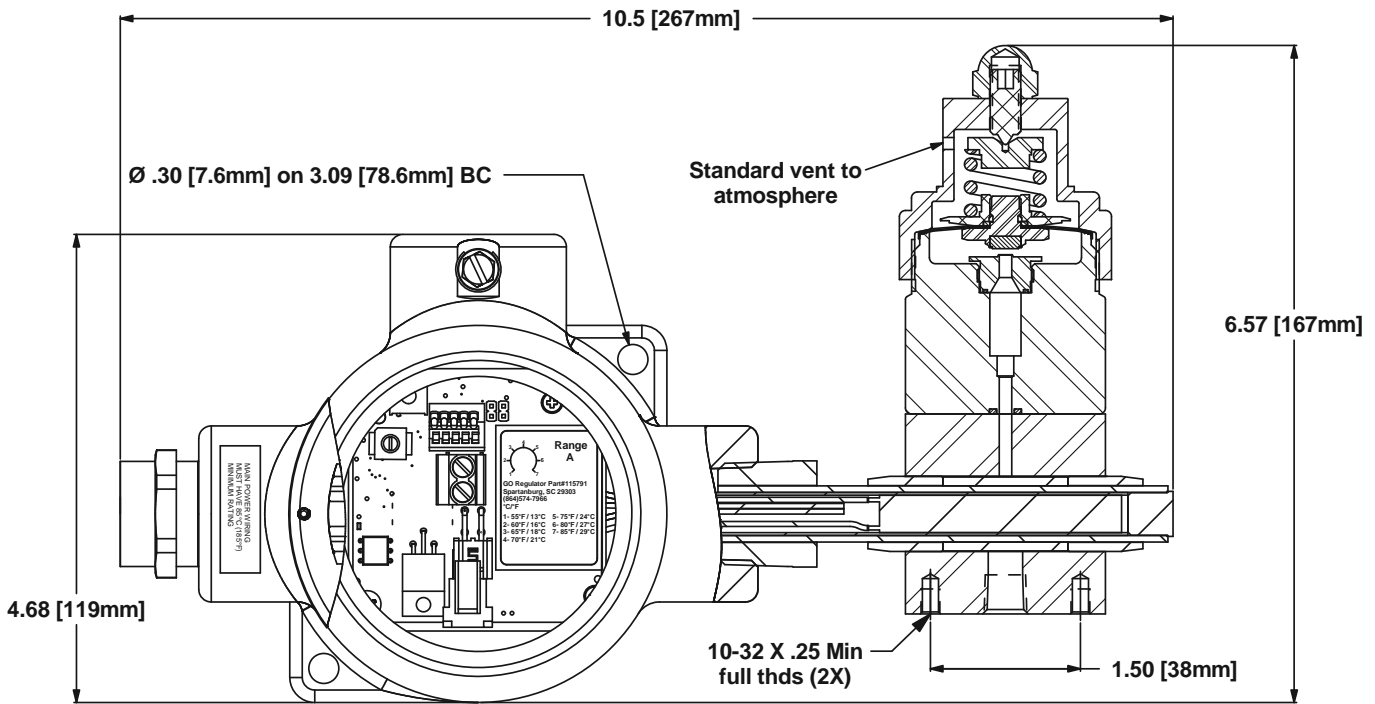
SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Viton®	Up to 175°F (79°C)	@	3600 psig (24.82 MPa)
	176°F to 300°F (80°C to 148°C)	@	Not Available
	301°F to 380°F (149°C to 193°C)	@	Not Available
High Density PTFE	Up to 175°F (79°C)	@	500 psig (3.45 MPa)
	176°F to 300°F (80°C to 148°C)	@	Not Available
	301°F to 380°F (149°C to 193°C)	@	Not Available
Ceramic Filled PTFE	Up to 175°F (79°C)	@	500 psig (3.45 MPa)
	176°F to 300°F (80°C to 148°C)	@	500 psig (3.45 MPa)
	301°F to 380°F (149°C to 193°C)	@	Not Available
Kalrez	Up to 175°F (79°C)	@	250 psig (1.72 MPa)
	176°F to 300°F (80°C to 148°C)	@	250 psig (1.72 MPa)
	301°F to 380°F (149°C to 193°C)	@	Not Available
Polyimide	Up to 380° F (193° C)	@	1000 psig (6.89 MPa)
PEEK™	Up to 380° F (193° C)	@	1000 psig (6.89 MPa)

### HBP Steam, 1 & 2-Piece Body

SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Viton®	Not Available	@	Not Available
High Density PTFE	Not Available	@	Not Available
Ceramic Filled PTFE	Up to 380° F (193° C)	@	250 psig (1.72 MPa)
Kalrez	Up to 380° F (193° C)	@	250 psig (1.72 MPa)
Polyimide	Up to 500° F (260° C)	@	1000 psig (6.89 MPa)
PEEK™	Up to 500° F (260° C)	@	1000 psig (6.89 MPa)

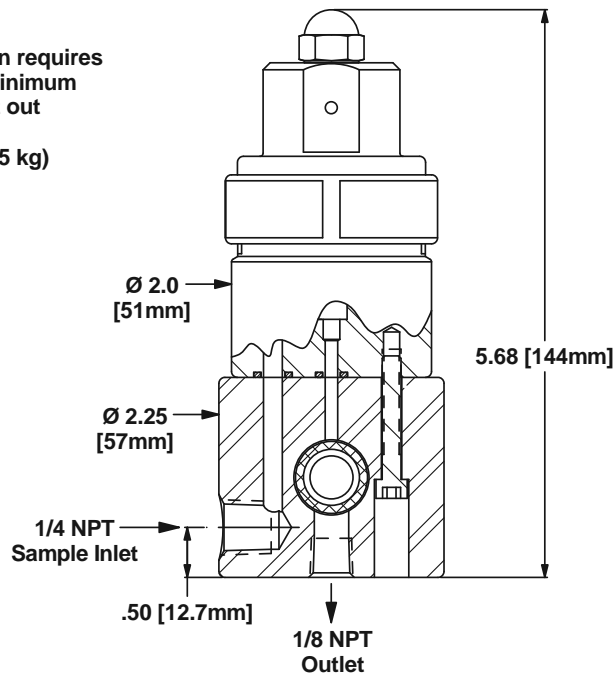
# HBP Series

## Outline & Mounting Dimensions



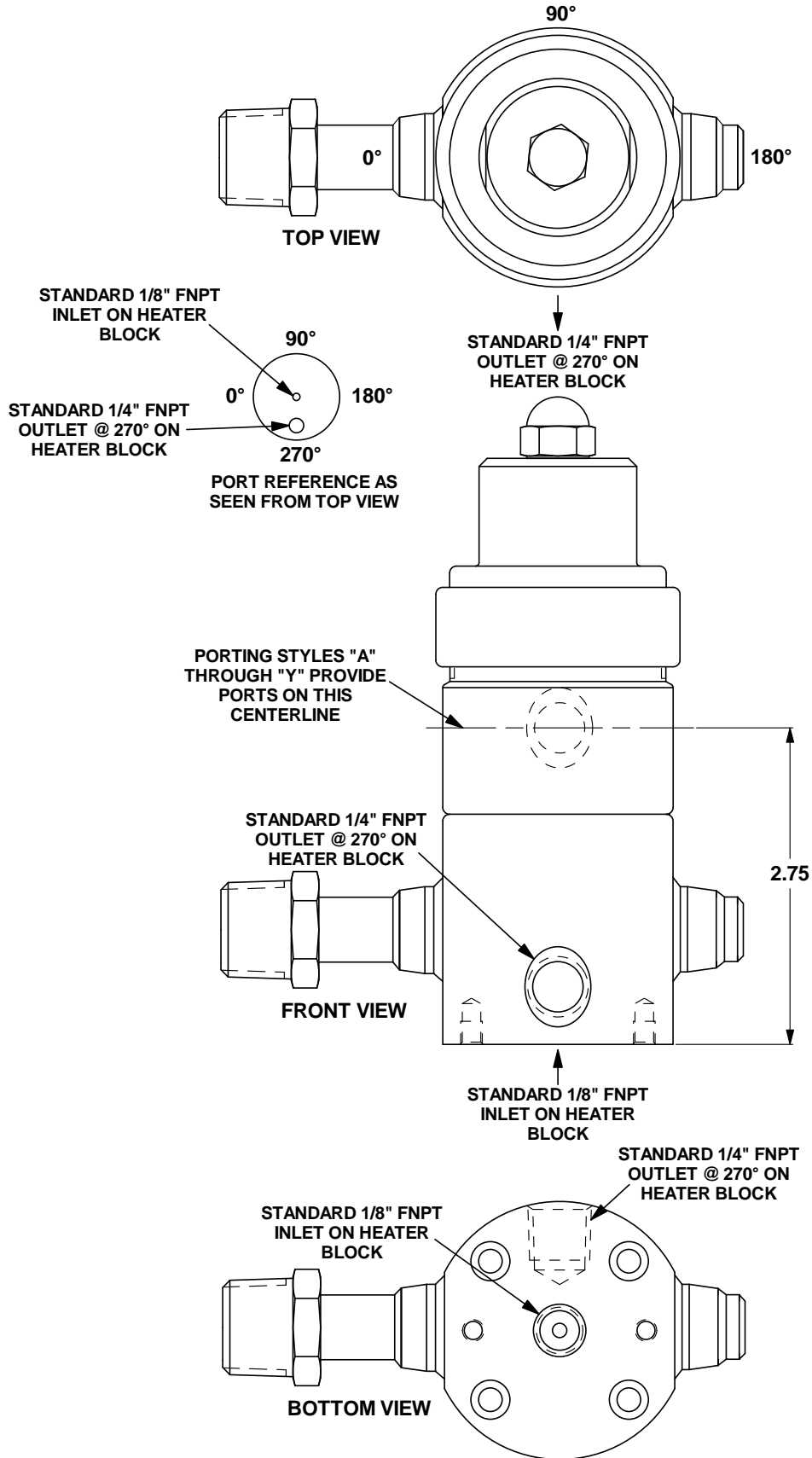
Panel mount option requires  
1.390" (35.3mm) minimum  
diameter panel cut out

Weight 8.7 lbs (3.95 kg)

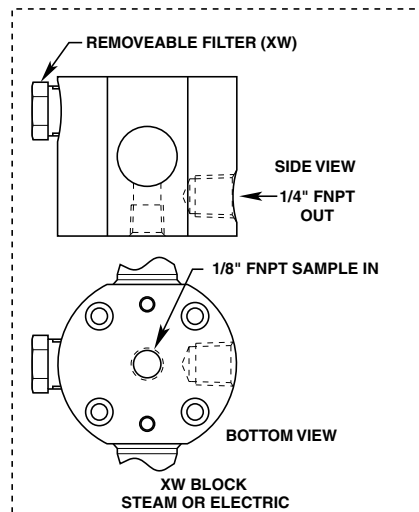
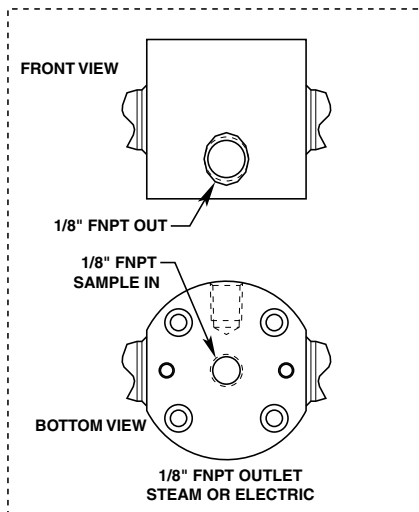
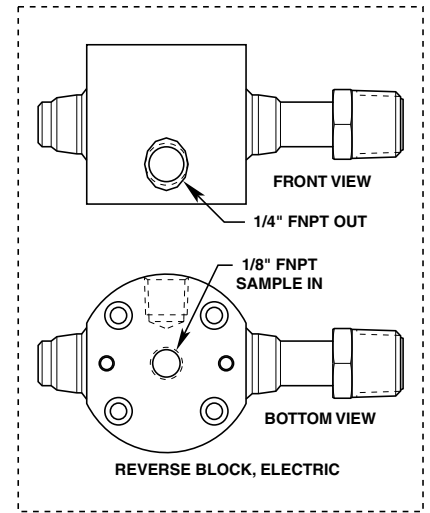
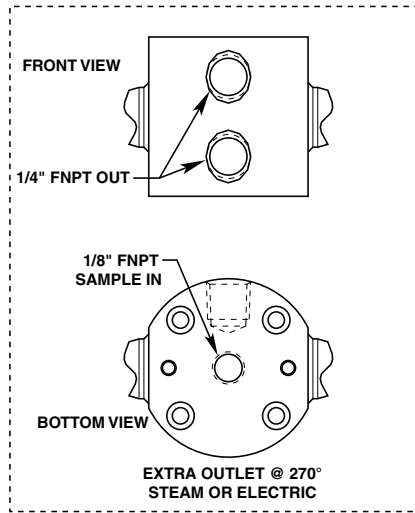
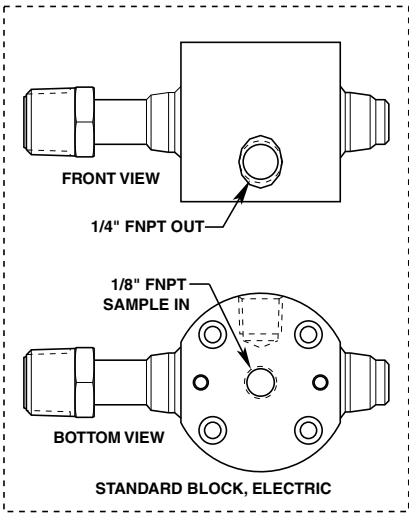
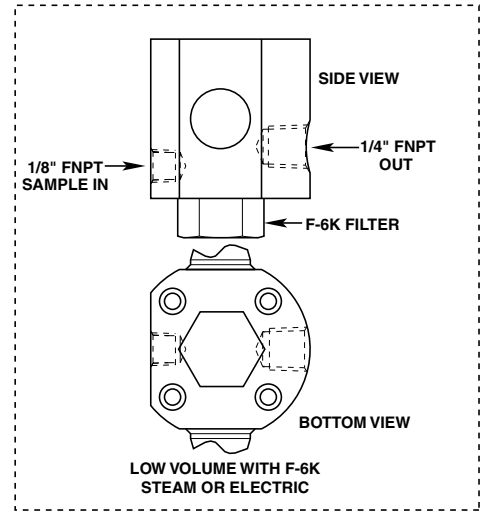
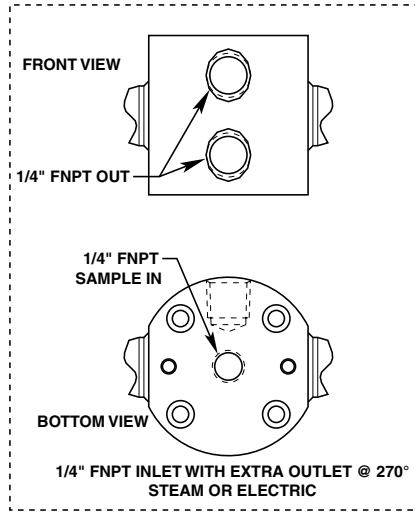
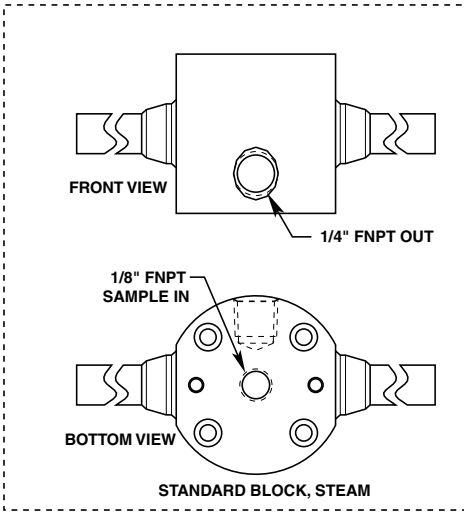


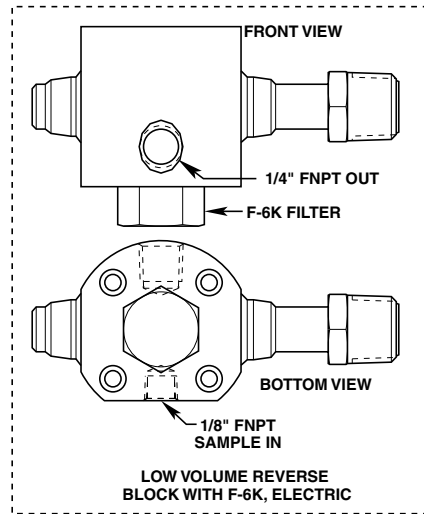
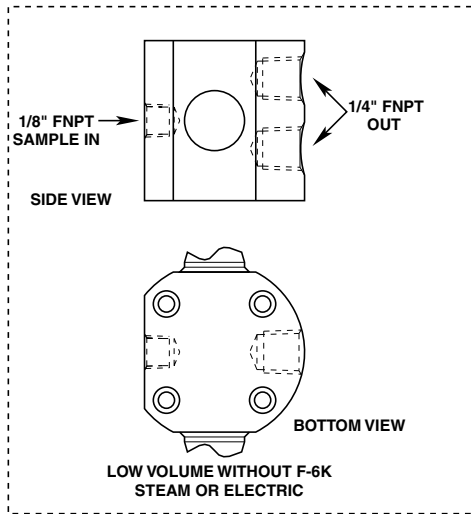
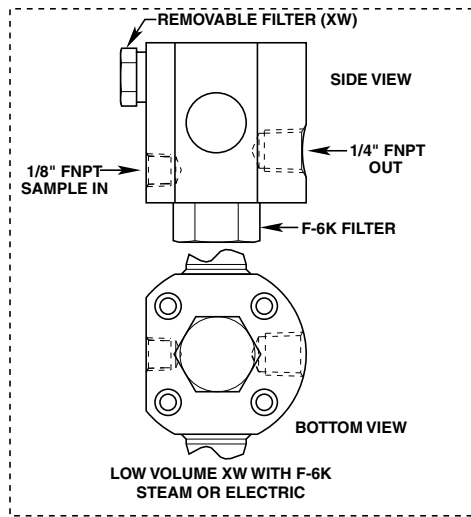
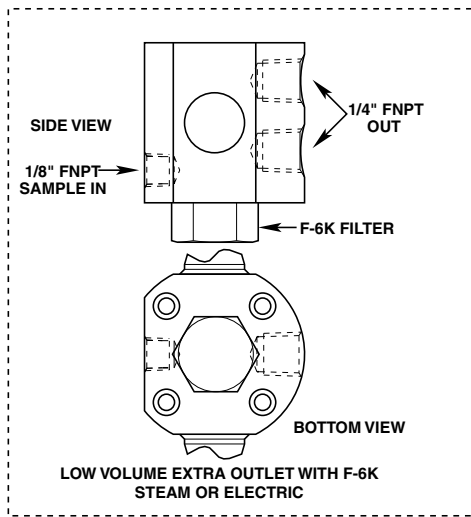


# HPR-2 Electric Port References

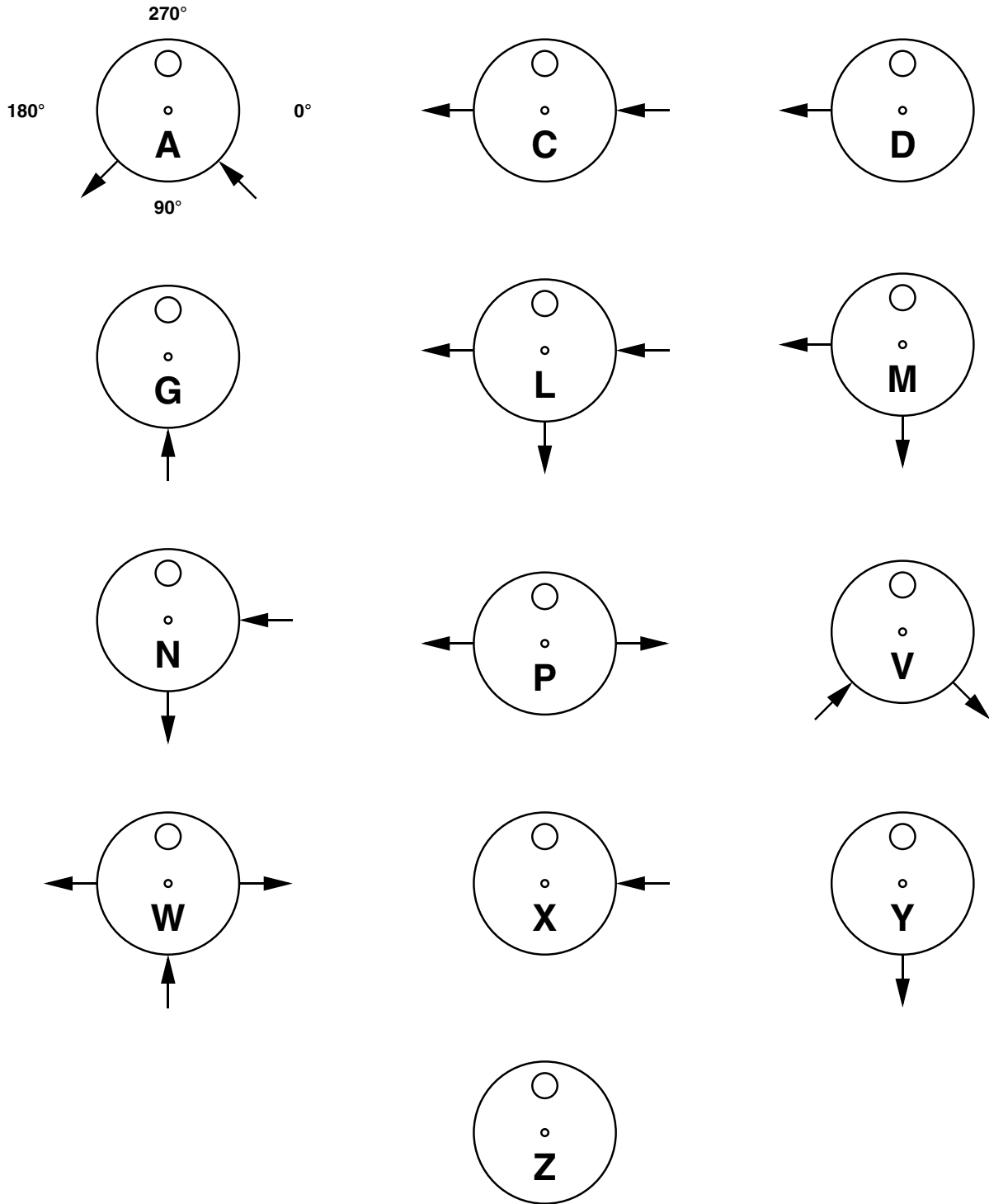


# Heater Block Configurations for HPR-2 Steam & Electric and HPR-2XW Steam & Electric Series



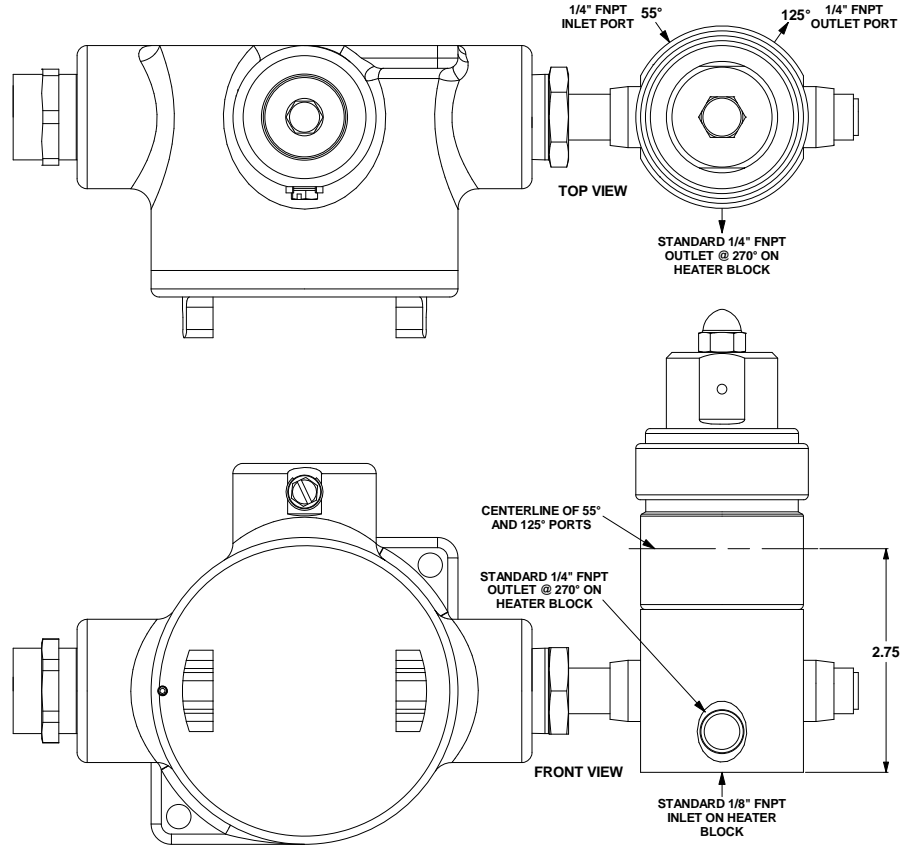


# Porting Configurations (Pressure Regulator Body) for HPR-2 Steam & Electric, HPR-2XW Steam & Electric Series and HBP Steam & Electric.

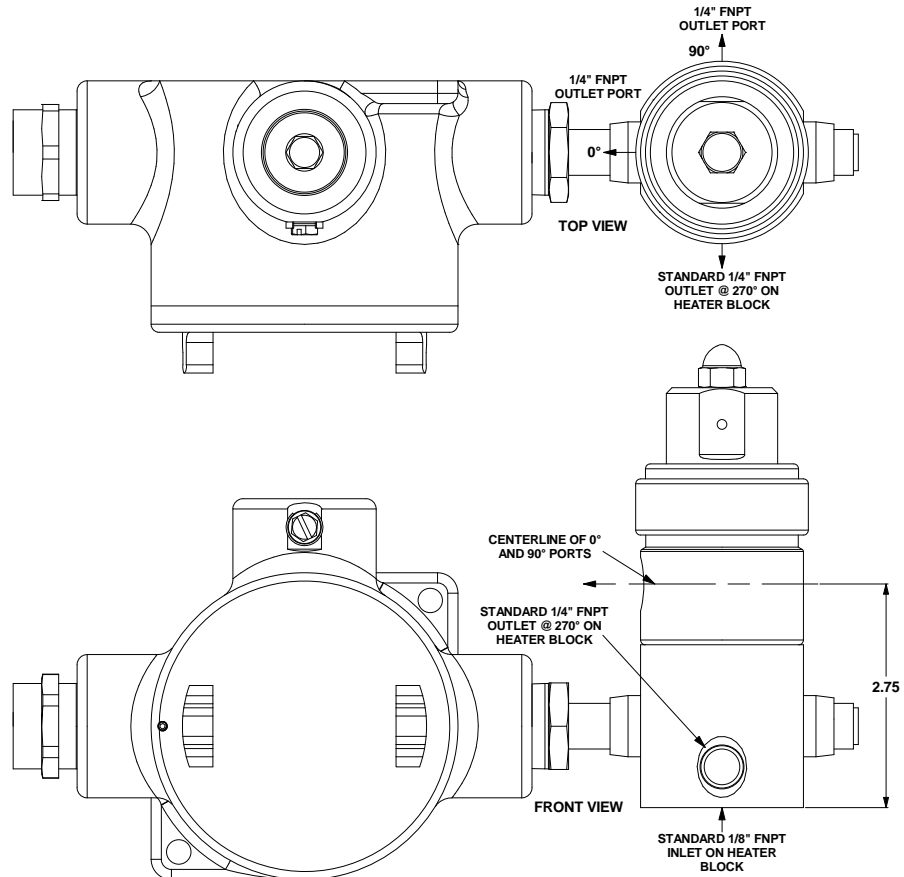


Location of ports from top view. Arrow pointing toward body is inlet. Arrow pointing away from body is outlet.

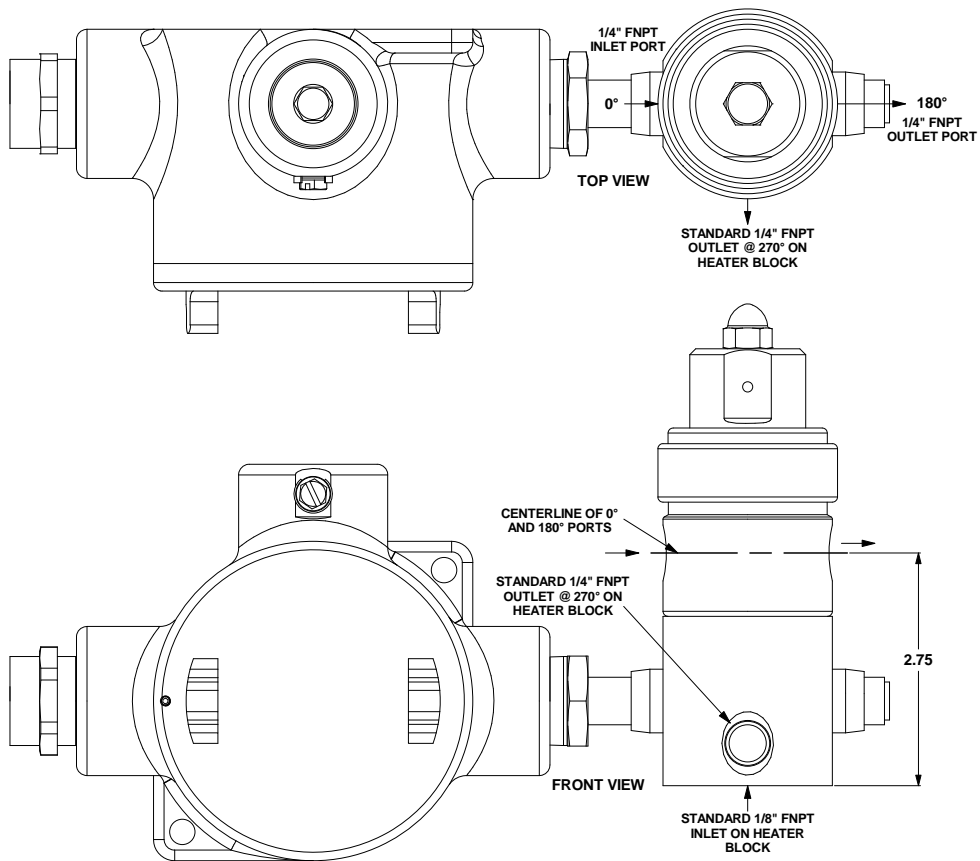
### HPR-2 A Style Porting Configuration



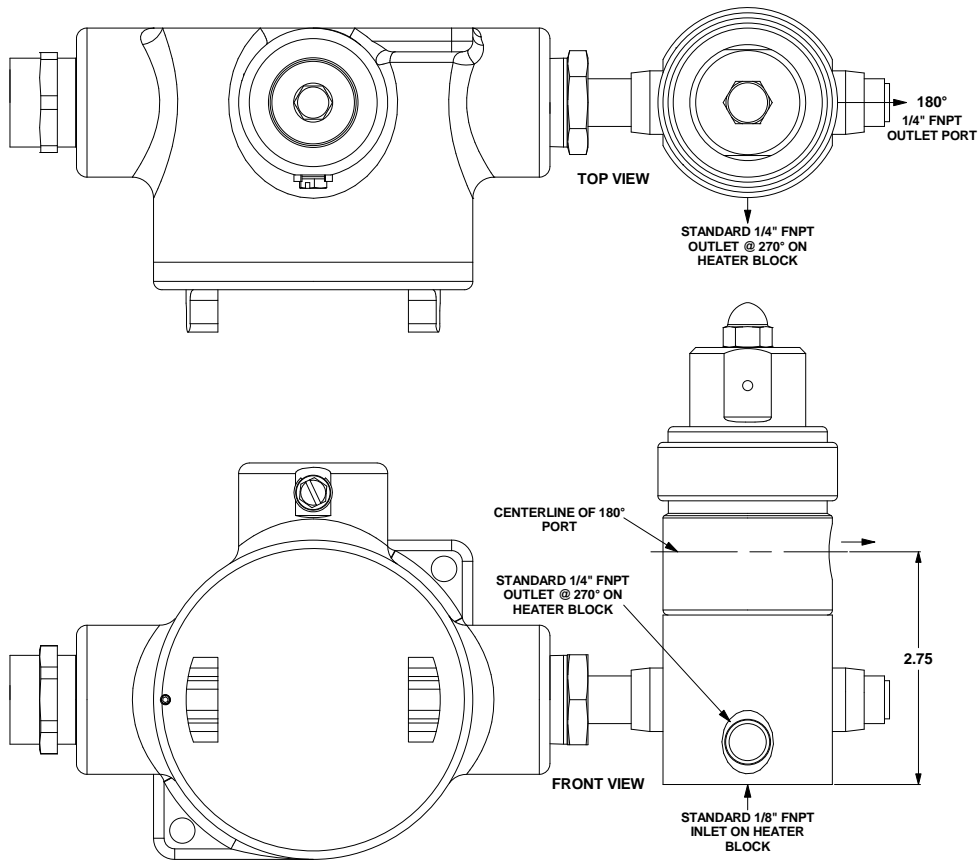
### HPR-2 B Style Porting Configuration



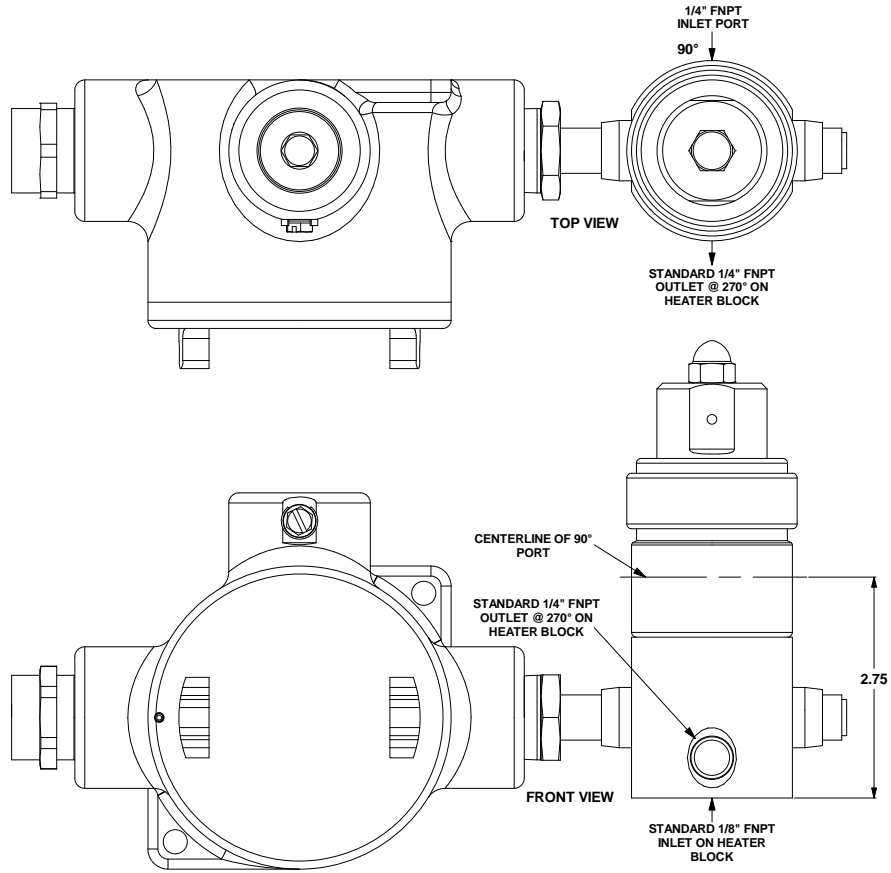
### HPR-2 C Style Porting Configuration



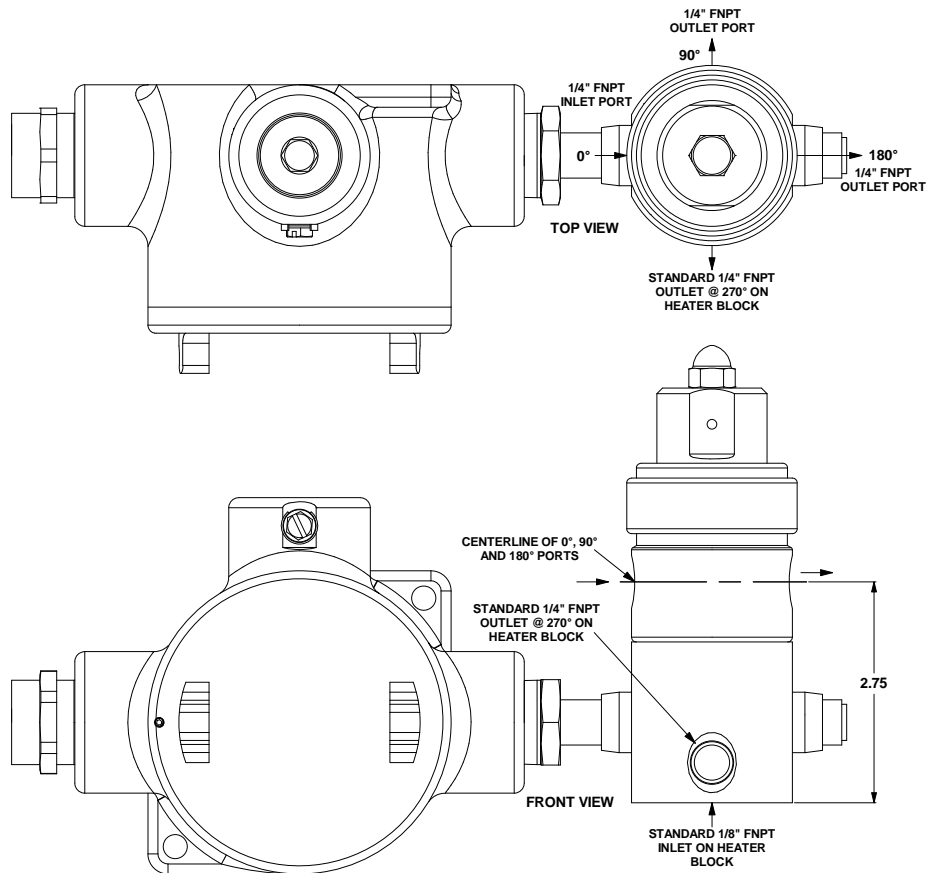
### HPR-2 D Style Porting Configuration



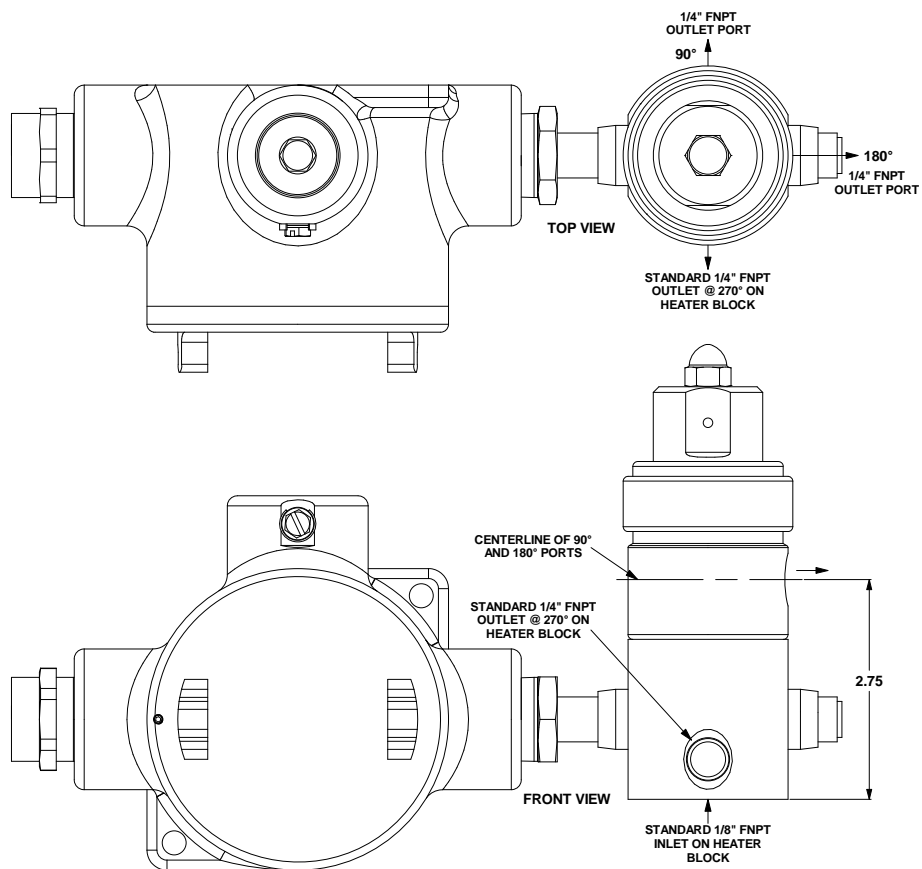
### HPR-2 G Style Porting Configuration



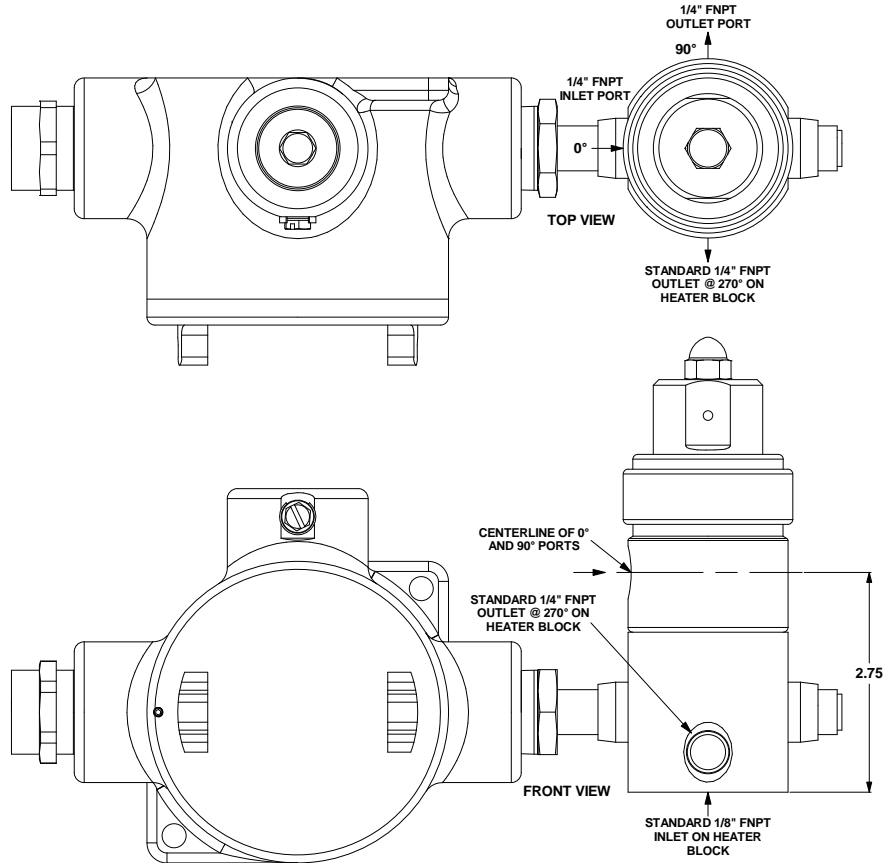
### HPR-2 L Style Porting Configuration



### HPR-2 M Style Porting Configuration

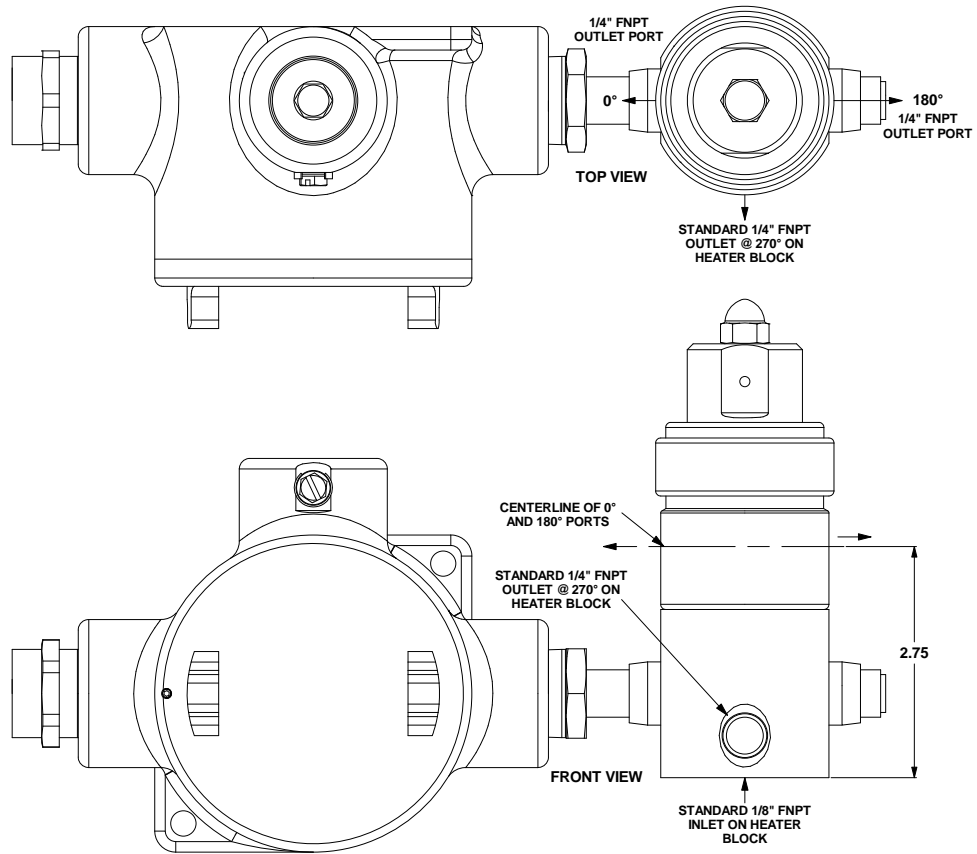


### HPR-2 N Style Porting Configuration

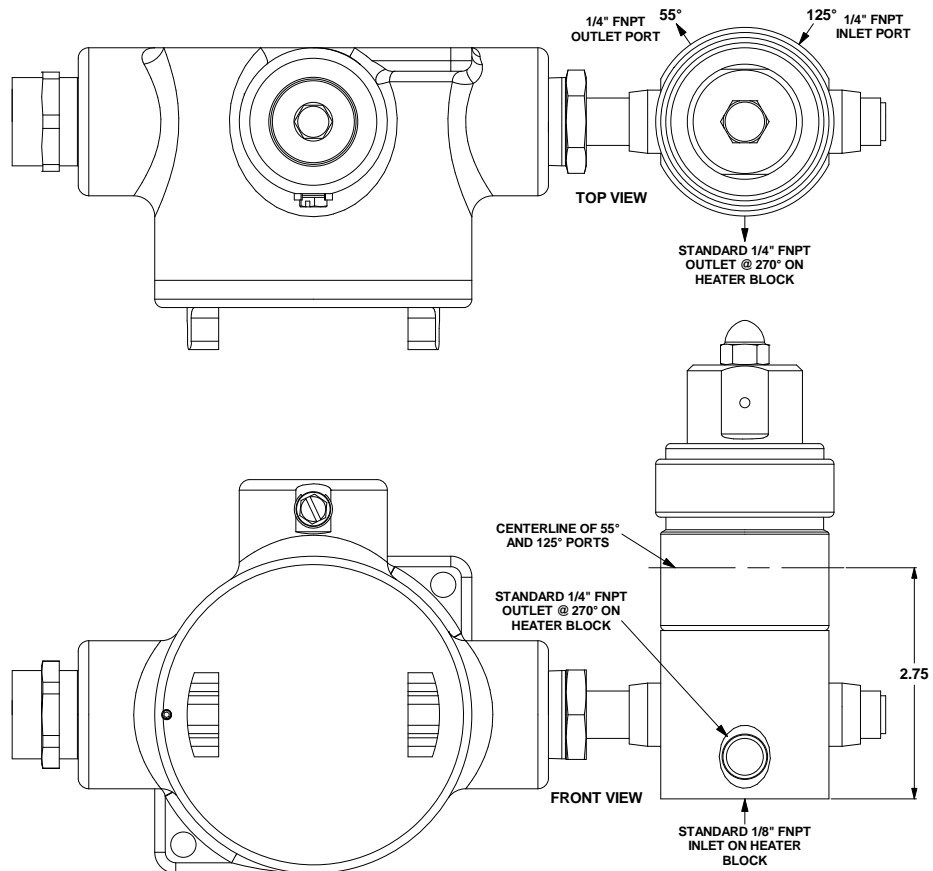




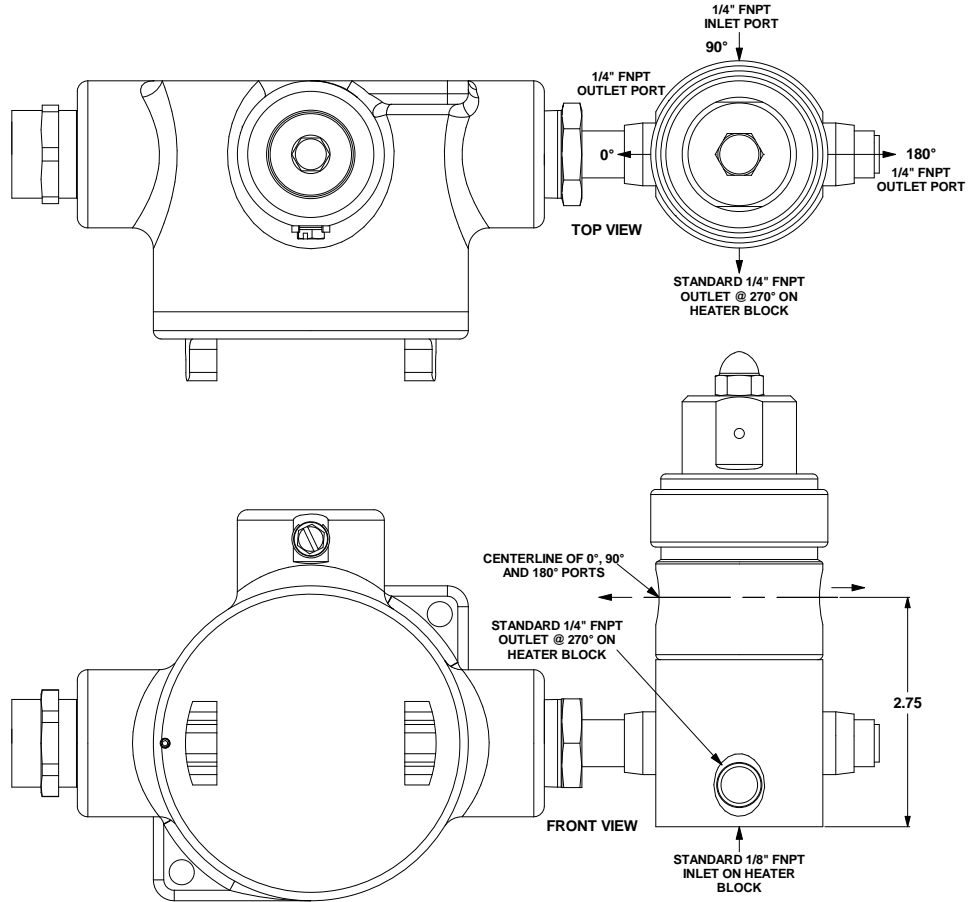
### HPR-2 P Style Porting Configuration



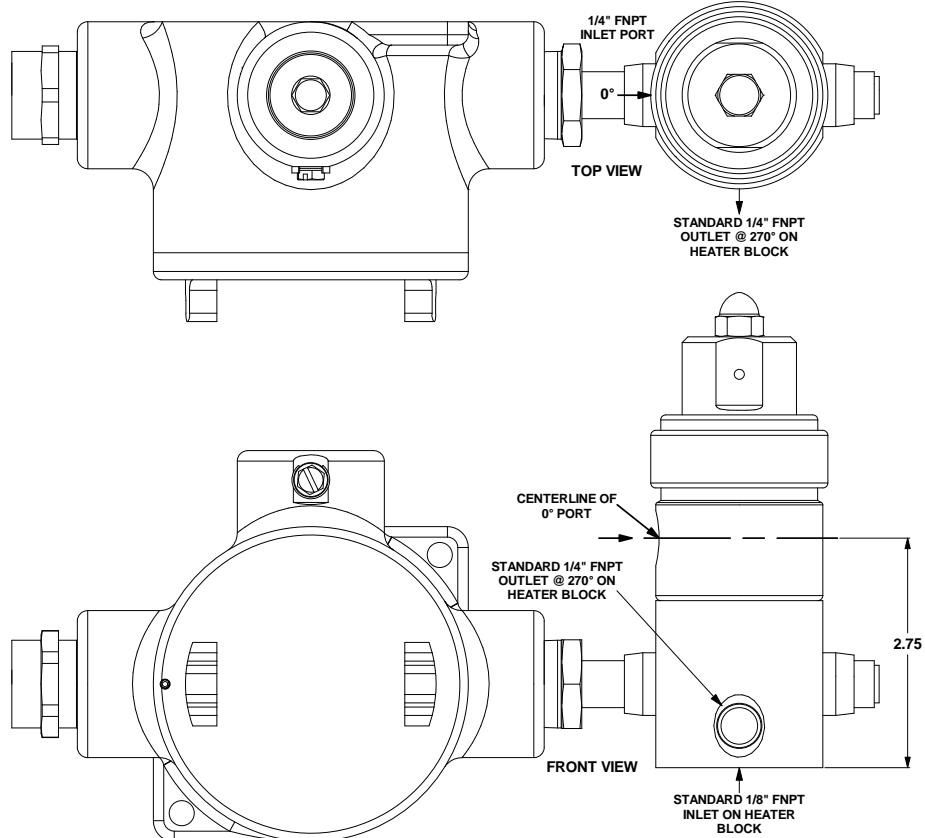
### HPR-2 V Style Porting Configuration



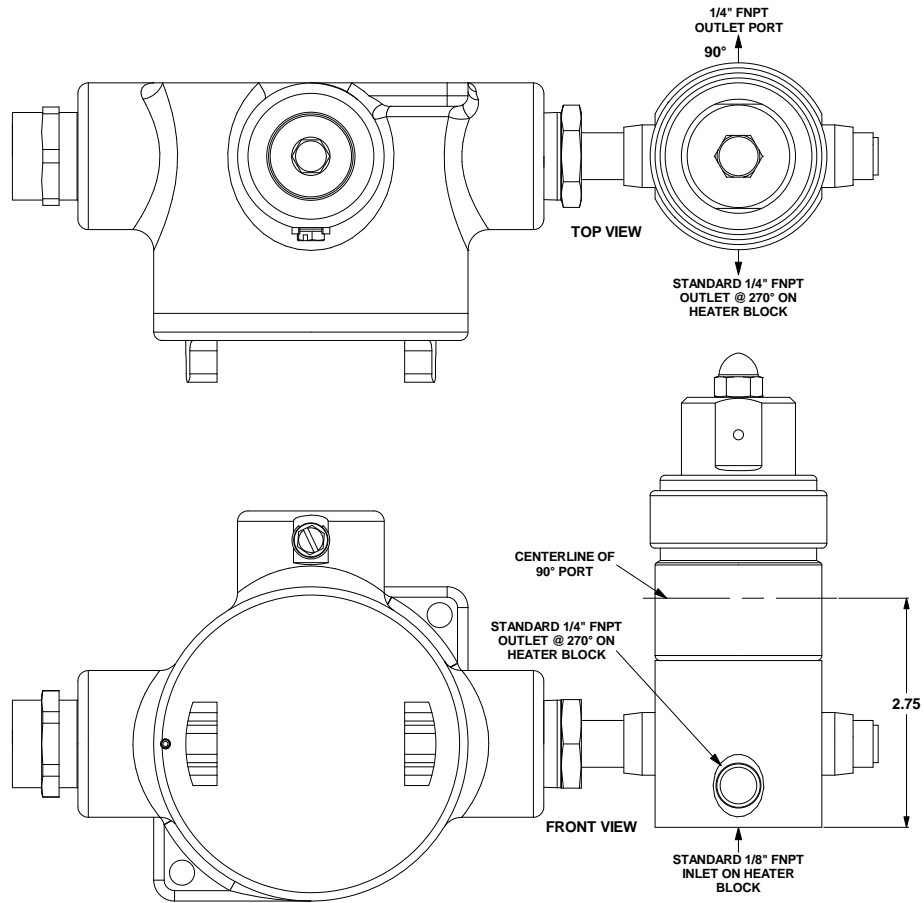
### HPR-2 W Style Porting Configuration



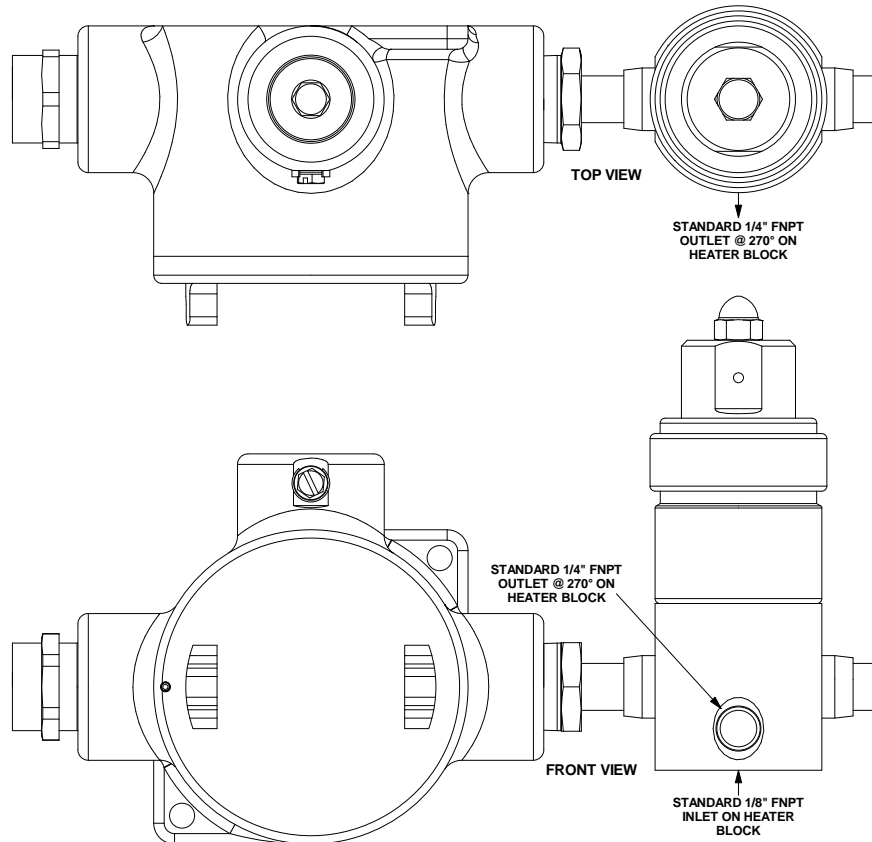
### HPR-2 X Style Porting Configuration



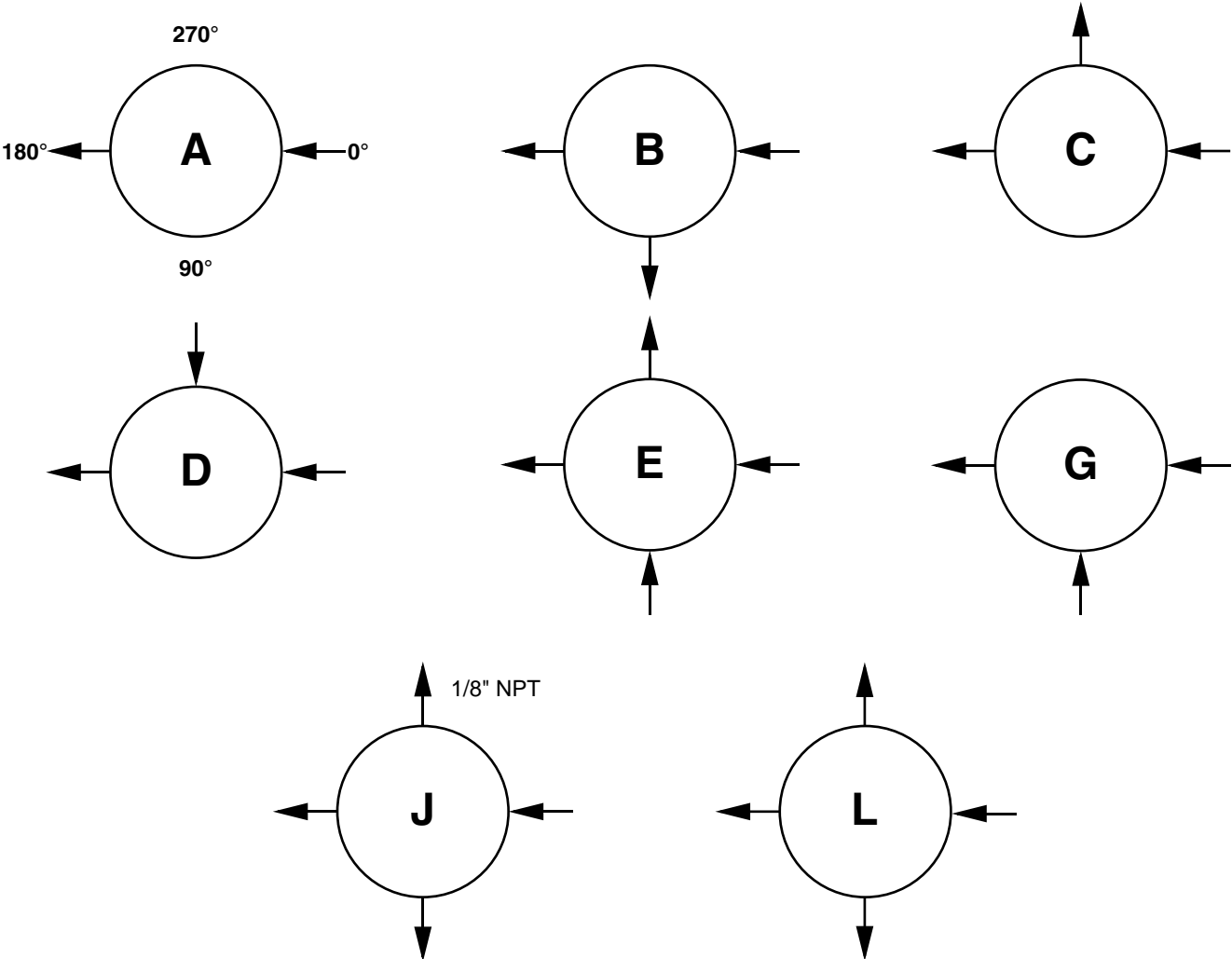
### HPR-2 Y Style Porting Configuration



### HPR-2 Z Style Porting Configuration

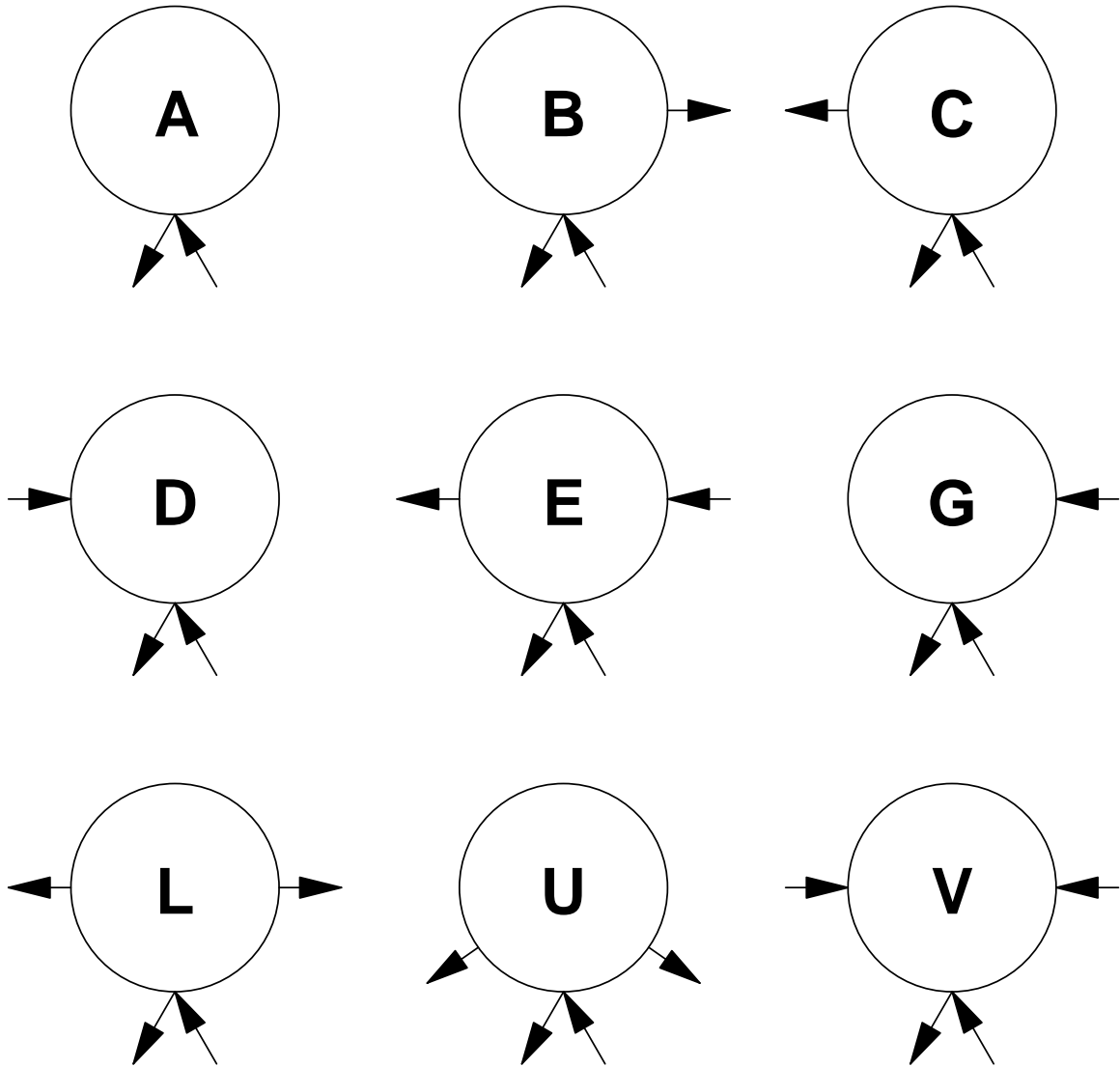


# Porting Configurations for MV-2 Series



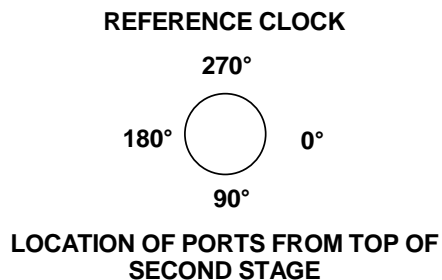
Location of ports from top view. Arrow pointing toward body is inlet. Arrow pointing away from body is outlet.

# CV2 Porting Configurations

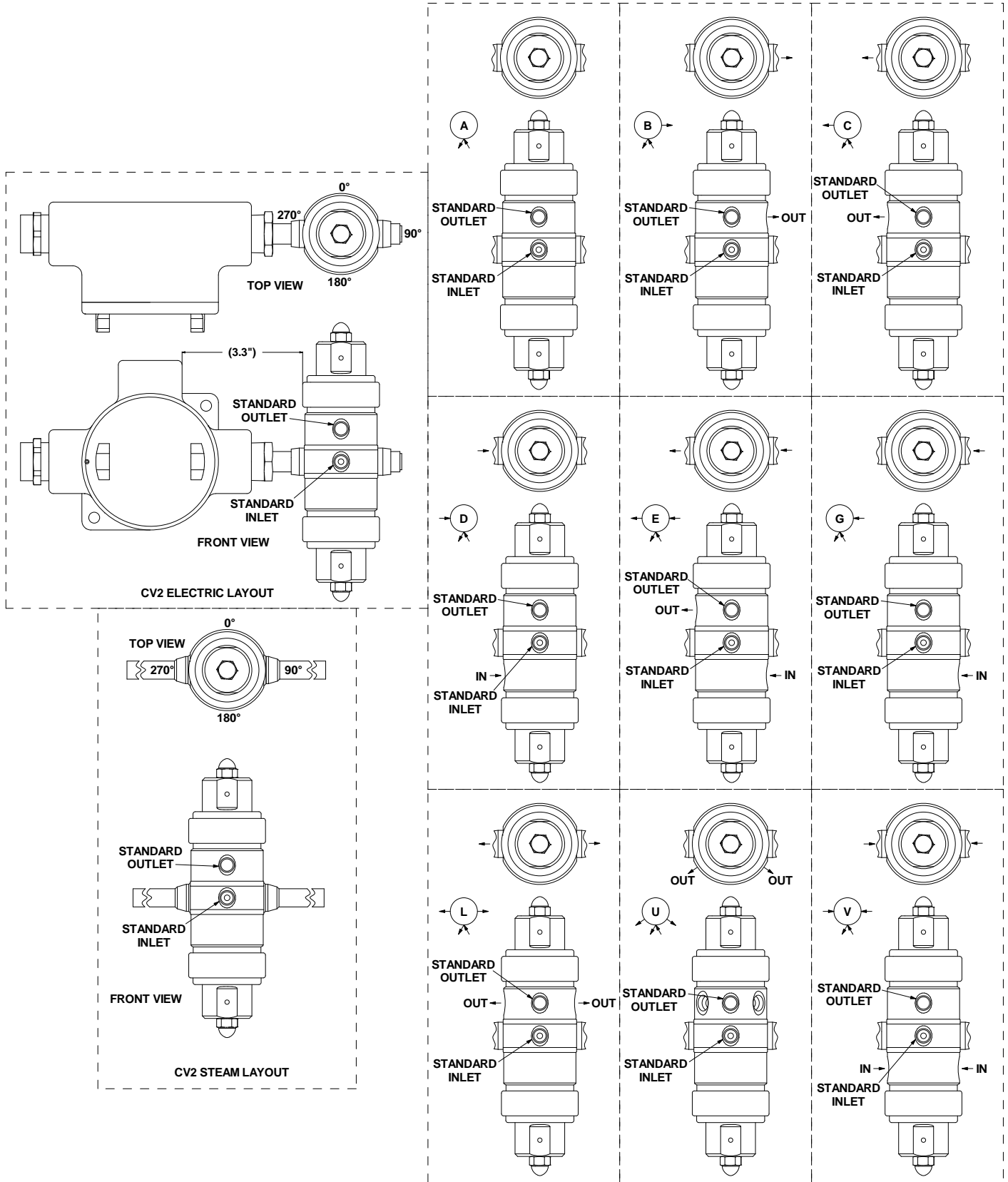


**Arrow pointing toward body is inlet.  
Arrow pointing away from body is outlet.**

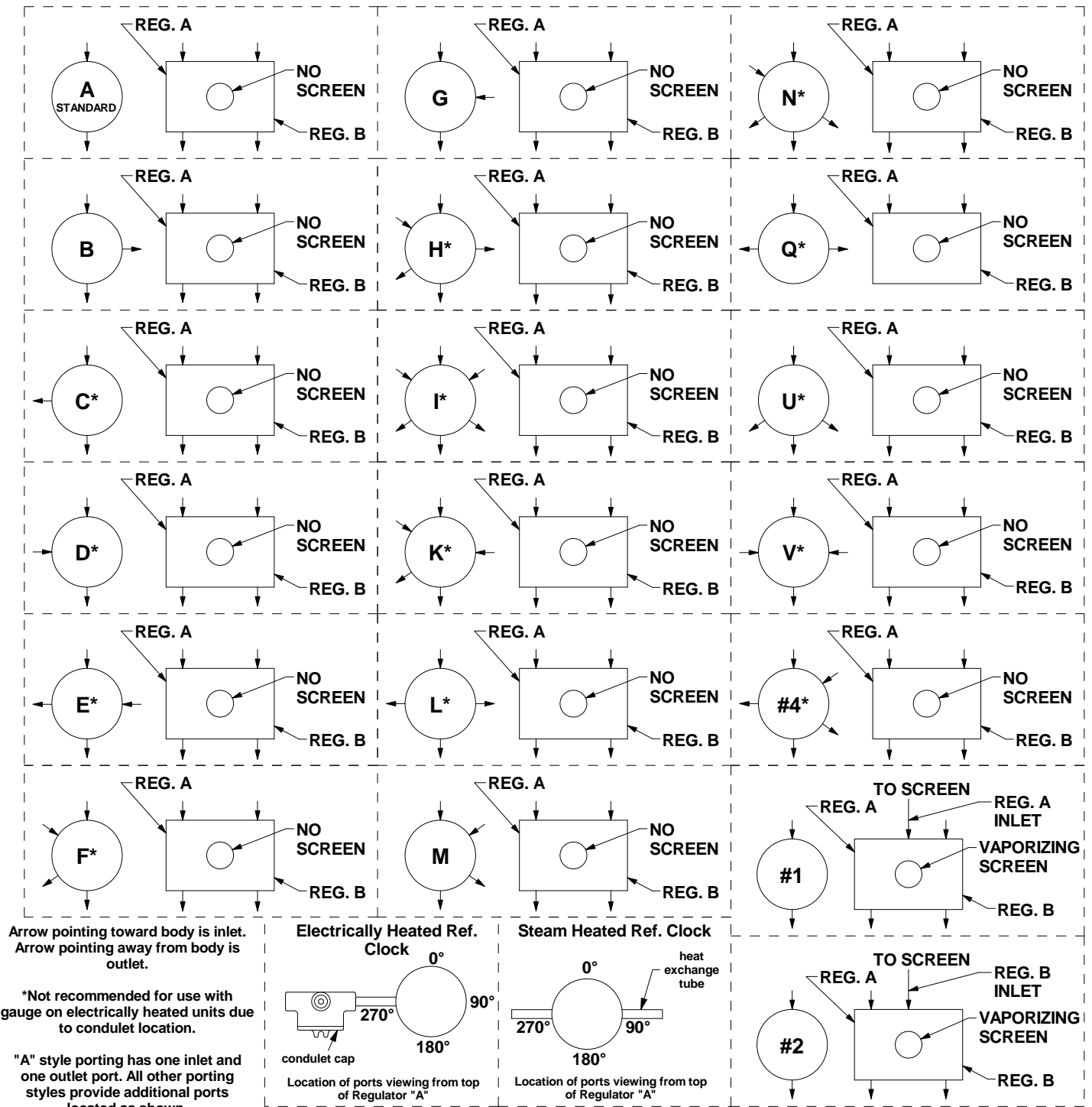
**90° ports are standard inlet and outlet ports, see graphic view.**



# CV2 Porting Configurations

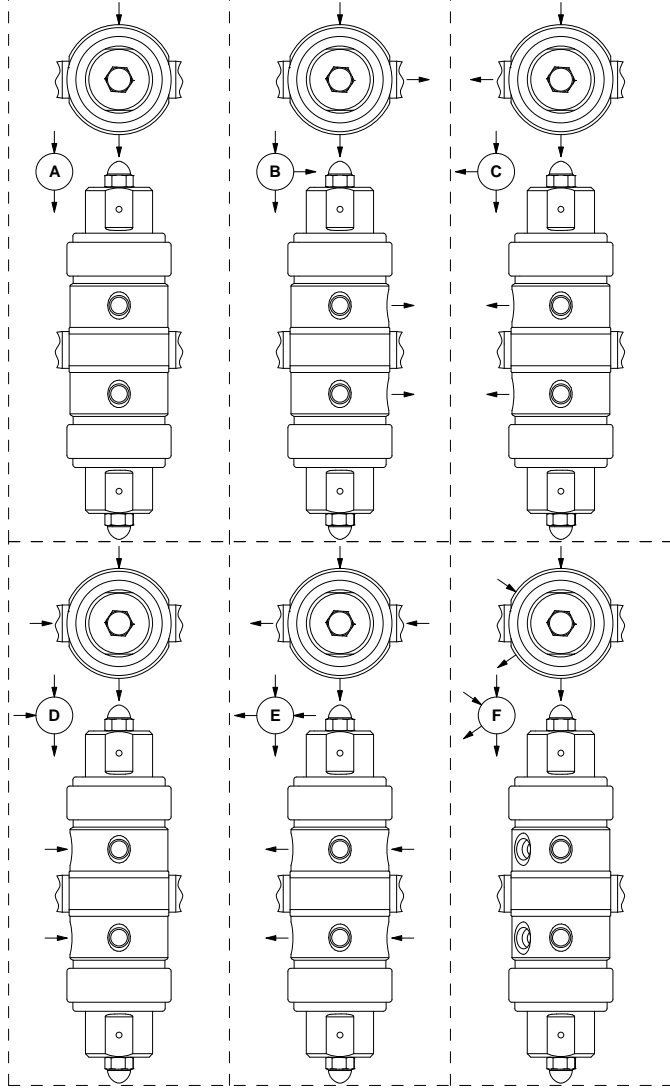
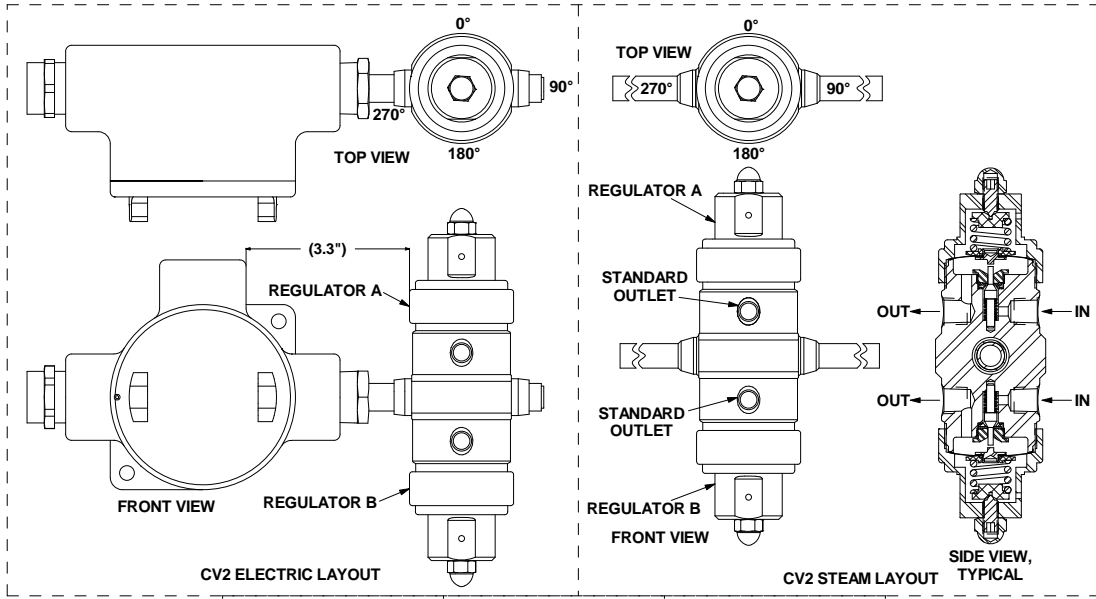


# Porting Configurations for DH2 Steam & Electric Series



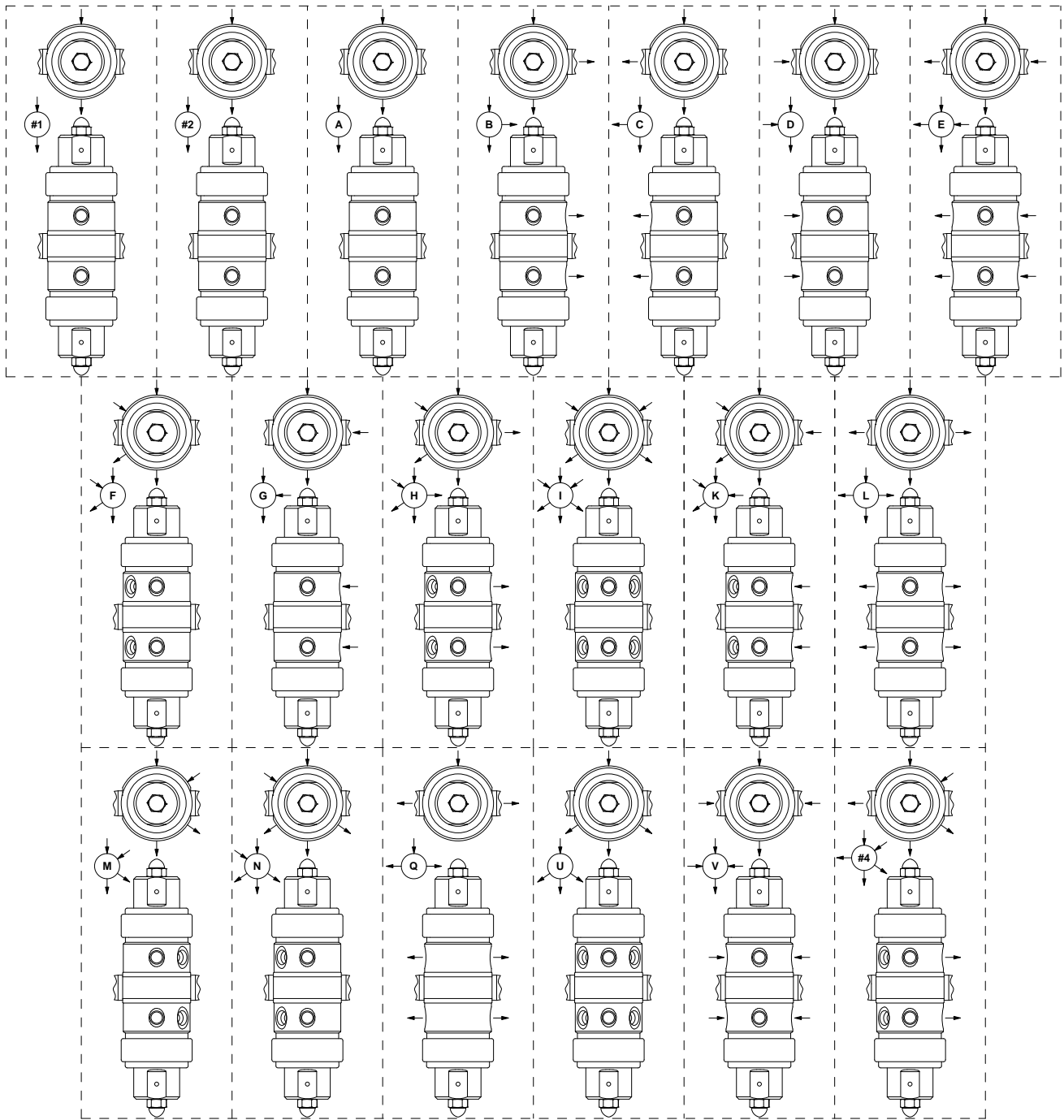
Arrow pointing toward body is inlet. Arrow pointing away from body is outlet.

# DH2 Porting Configurations continued





# DH2 Porting Configurations continued



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