Vaporizing Pressure Regulators

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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. 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:

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.



Typical Applications

Analytical process sample conditioning systems:

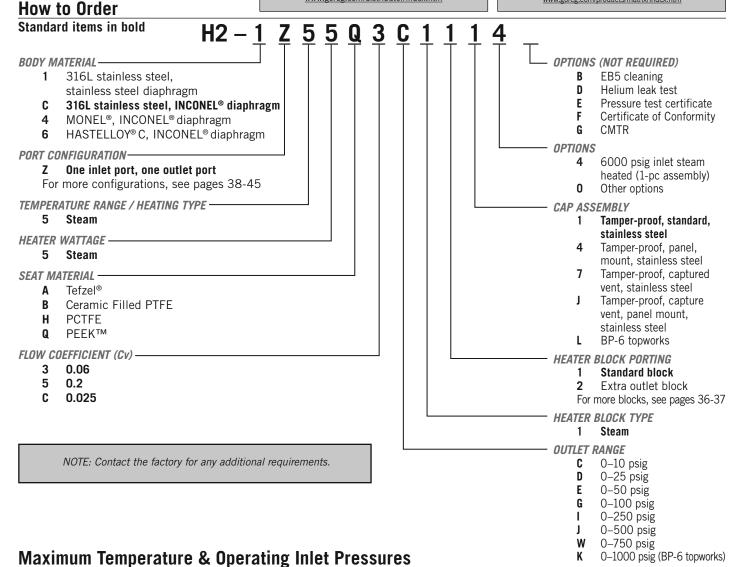
- Petrochemical refineries
- Chemical production facilities
- Pilot plants (chemical & petrochemical)
- LNG loading and off-loading points
- · Natural gas pipeline sampling

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 _V COEFFICIENTS	0.06, 0.025, 0.2
INLET CONNECTIONS	⅓″FNPT
OUTLET CONNECTIONS	1/4" FNPT

- 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.

To Order, contact your local Distributor Link below: <u>www.goreg.com/distributor/index.htm</u> Verify that your chosen part number is valid using the GO Wizards at www.goreg.com/products/matrix/index.htm



HPR-2 Steam 2-piece Assembly

(Heater block and regulator body separate)

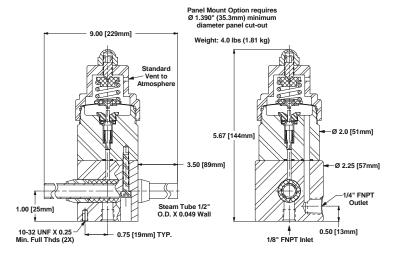
SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
Ceramic Filled PTFE, Tefzel®, & PCTFE	Up to 380° F (193° C)	@	400 psig (2.76 MPa)
PEEK™	Up to 500° F (260° C)	@	3600 psig (24.82 MPa)

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



ressure

GO REGULATOR, INC.

HPR-2 Series

Electrically Heated Regulators

Introduction

The HPR-2 Series heated pressure regulator is designed to supply heat to samples entering instrumentation systems. It can be used to preheat liquids, to prevent condensation of gases or to vaporize liquids prior to gas analysis.

The modular design of the HPR-2 consists of heat exchanger and pressure control sections. The pressure control section is patterned after the time proven design of the PR-1 pressure reducing regulator and provides the same excellent outlet pressure stability. The heat exchanger section is made up of a body and heat exchange element. The heat exchange element uses GO Regulator's



unique spiral wrapped screen as the heat exchange surface. This screen has up to 100 square inches of heat transfer area and precise design forces all sample flow to pass through the element.

The HPR-2 Series of vaporizing pressure reducing regulators are both CSA and ATEX approved. The electrical components of this unit are securely housed in a Class A, B, C, D condulet 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).

Typical Applications

Analytical process sample conditioning systems:

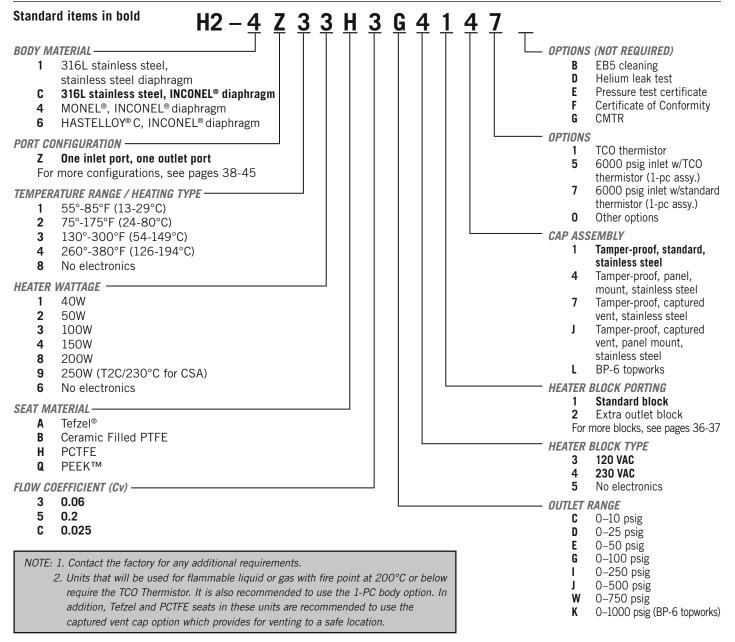
- Petrochemical refineries
- Chemical production facilities
- Pilot plants (chemical & petrochemical)
- LNG loading and off-loading points
- Natural gas pipeline sampling

Technical Data

CONSTRUCTION	316L stainless steel			
OUTLET PRESSURES	0-10, 0-25, 0-50, 0-100, 0-250, 0-500, 0-750 and 0-1000 psig			
INLET PRESSURE	up to 6000 psig at 380° F (193° C)			
HEATING CAPACITY RANGES (IN WATTS)	50, 100, 150, 200 and 250			
C _V COEFFICIENTS	0.06, 0.025, 0.2			
CERTIFICATIONS	CSA certification # LR-82566-5 ATEX Directive 2014/34/EU Certification # TRL03ATEX11001X			

- 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

How to Order



Maximum Temperature & Operating Inlet Pressures

HPR-2 Electric 2-piece Assembly

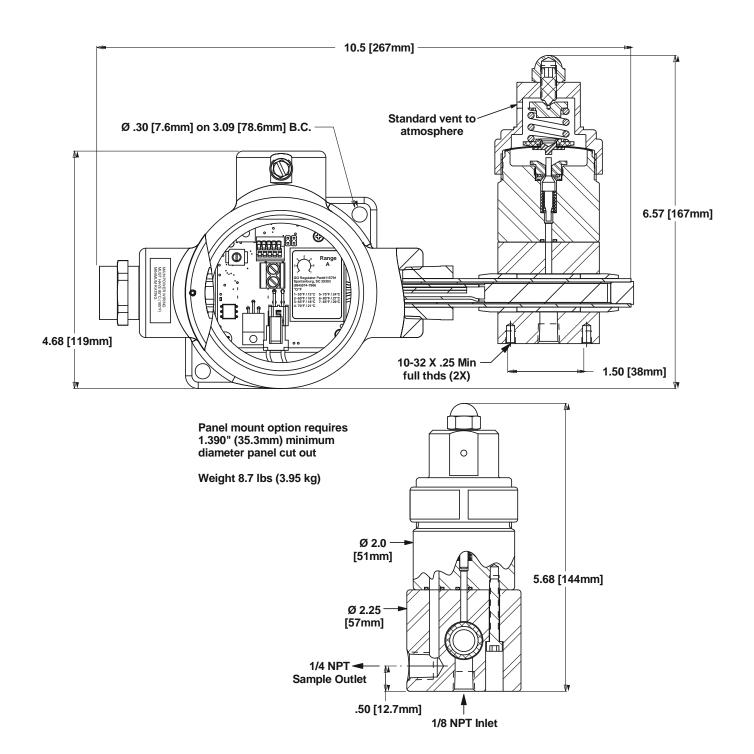
(Heater block and regulator body separate)

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SEAT MATERIAL		MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
	Up	to 175° F (80° (C) @	3600 psig (24.82 MPa)
Tefzel [®] Ceramic Filled PTFE		76° F to 300° F 30° C to 148° C)	(a)	1000 psig (6.90 MPa)
& PCTFE		01° F to 380° F 48° C to 193° C	(0)	400 psig (2.76 MPa)
PEEK™	Up t	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
	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
Tefzel® & Ceramic Filled PTFE	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
& Ceramic Filled PTFE	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)
TOTIL	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)



GO REGULATOR, INC. 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.

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 _V COEFFICIENTS	0.06, 0.025, 0.2		
INLET CONNECTIONS	½″ FNPT		
OUTLET CONNECTIONS	1/4″ FNPT		

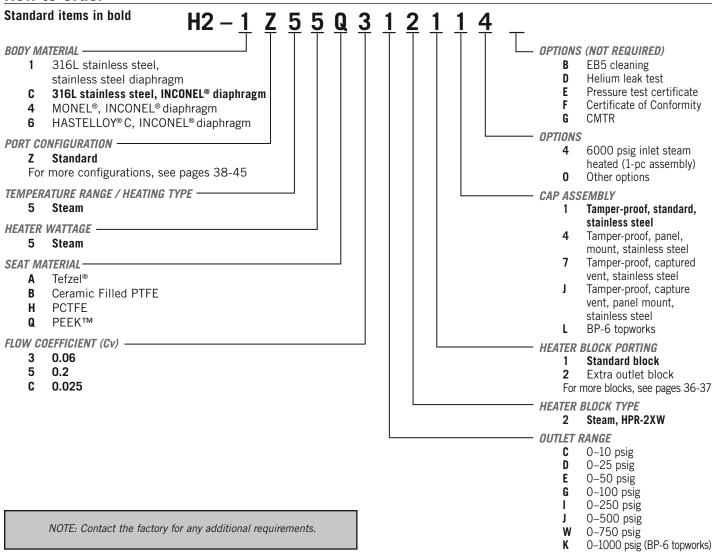
Features & Benefits

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

lators

To Order, contact your local Distributor Link below: <u>www.goreg.com/distributor/index.htm</u> Verify that your chosen part number is valid using the GO Wizards at <u>www.goreg.com/products/matrix/index.htm</u>

How to Order



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)

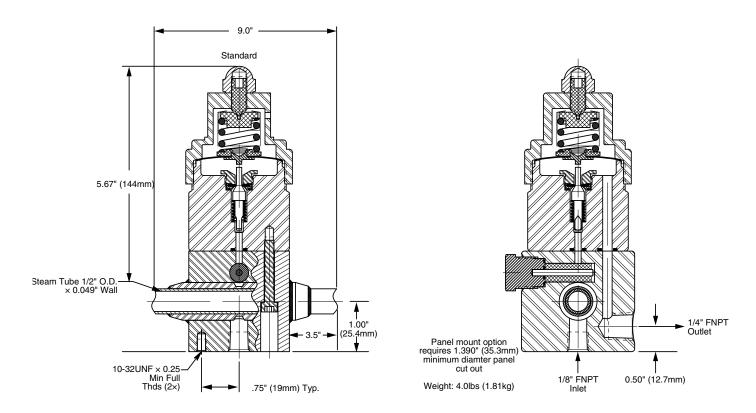
HPR-2XW Steam 1-piece Assembly

(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

Electrically Heated Pressure Regulator

liquids that polymerize and clog the heat exchange screen.

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

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 condulet 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).



Typical Applications

Analytical process sample conditioning systems:

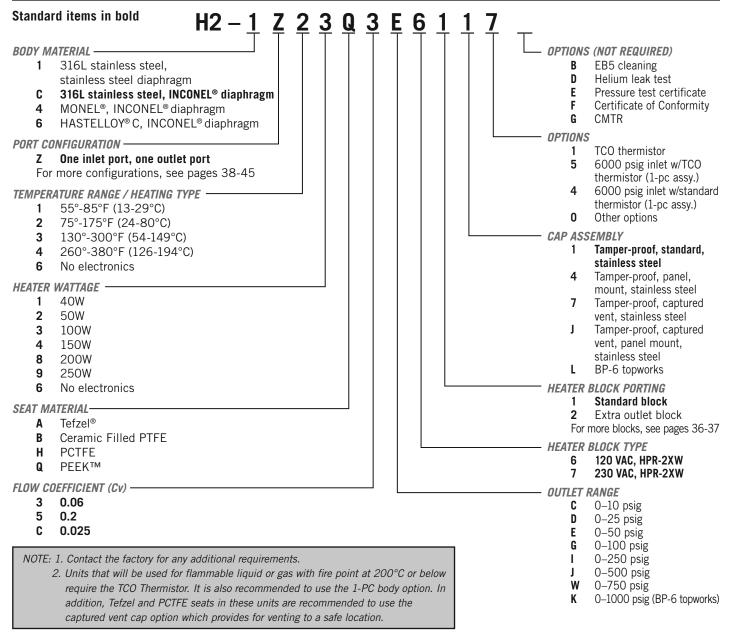
- Petrochemical refineries
- Chemical production facilities
- Pilot plants (chemical & petrochemical)
- LNG loading and off-loading points
- Natural gas pipeline sampling

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
OPERATING TEMPERATURE	up to 380° F (193° C)
HEATING CAPACITY RANGES (IN WATTS)	40, 50, 100, 150, 200, and 250
C _V COEFFICIENTS	0.06, 0.025, 0.2
CERTIFICATIONS	CSA certification # LR-82566-5 ATEX Directive 2014/34/EU Certification # TRL03ATEX11001X

- Optional HASTELLOY® C-276 & 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 for T3 operation
- INCONEL® diaphragm standard

How to Order



Maximum Temperature & Operating Inlet Pressures

HPR-2XW Electric 2-piece Assembly

(Heater block and regulator body separate)

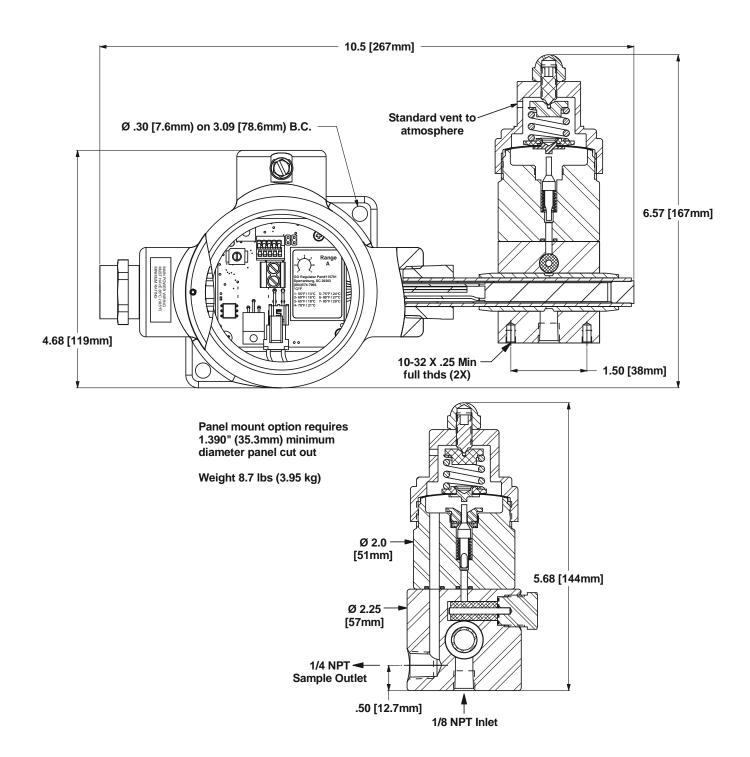
SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
Tefzel® Ceramic Filled PTFE	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
& PCTFE	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PEEK™	Up to 380° F (193° C)	@	3600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

Maximum Temperature & Operating Inlet Pressures



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 condulet 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)



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

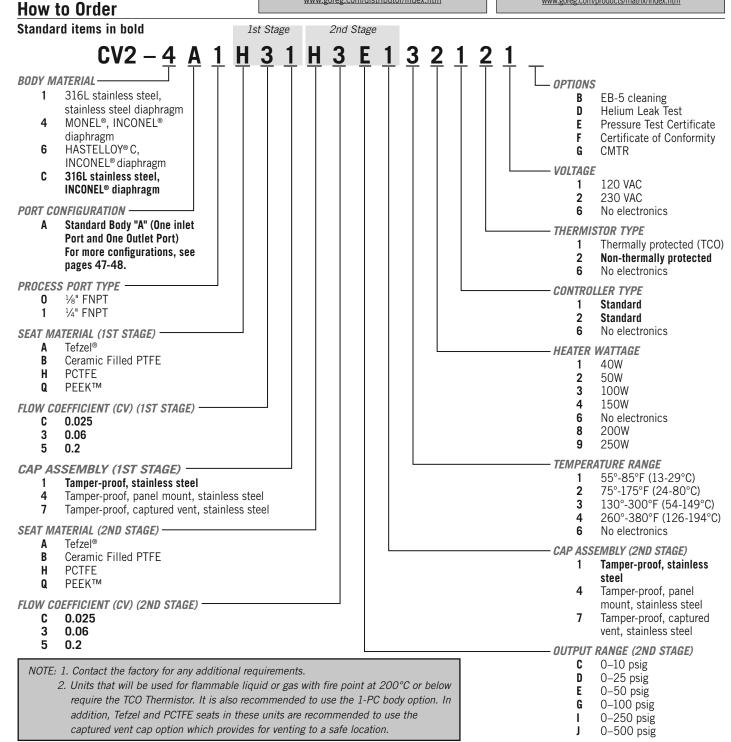
CONSTRUCTION	316L stainless steel
OUTLET PRESSURES	0-10, 0-25, 0-50, 0-100, 0-250, and 0-500 psig
INLET PRESSURE	up to 6000 psig @ 380°F (193° C)
HEATING CAPACITY RANGES (IN WATTS)	40, 50, 100, 150, 200, and 250
C _V COEFFICIENTS	0.06, 0.025, 0.2
CERTIFICATIONS	CSA certification # LR-82566-5 ATEX Directive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

- HASTELLOY® C-276 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 230VAC
- Optional TCO for T3 rating
- INCONEL® diaphragm standard

CV2 Series Cylinder Vaporizer

To Order, contact your local Distributor Link below: www.goreg.com/distributor/index.htm

Verify that your chosen part number is valid using the GO Wizards at www.goreg.com/products/matrix/index.htm

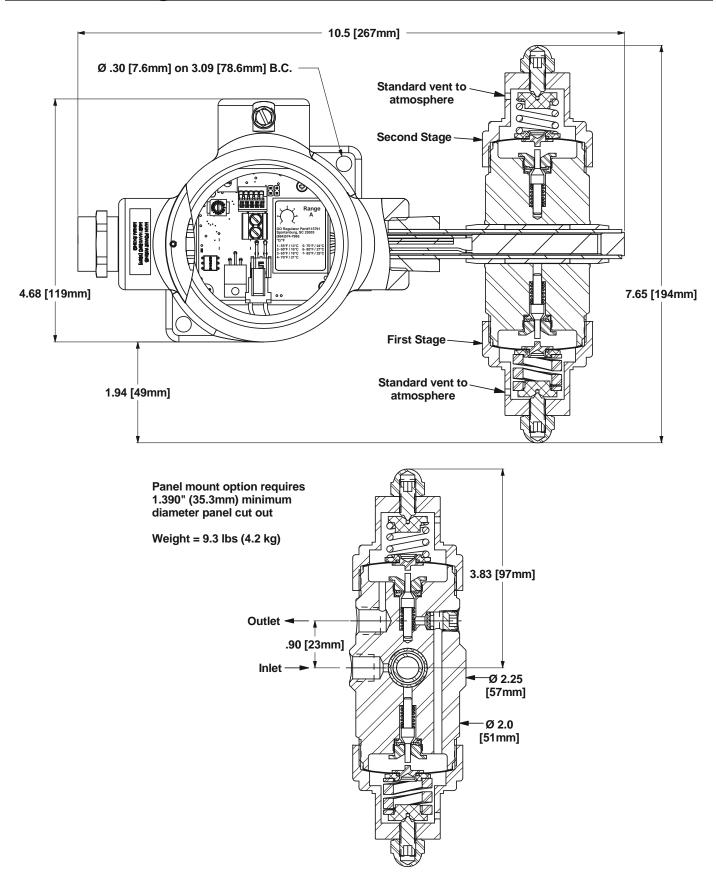


Maximum Temperature & Operating Inlet Pressures

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

CV2 Series Cylinder Vaporizer

Outline and Mounting Dimensions



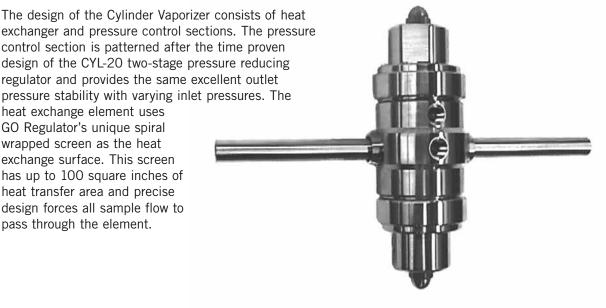
CV2 Series Cylinder Vaporizer

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.

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

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

- Optional HASTELLOY® C-276 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.
- INCONEL® diaphragm standard

CV2 Series Cylinder Vaporizer

How to Order

To Order, contact your local Distributor Link below: www.goreg.com/distributor/index.htm

Verify that your chosen part number is valid using the GO Wizards at www.goreg.com/products/matrix/index.htm

Standard items in bold

1st Stage 2nd Stage Q 3 G **BODY MATERIAL OPTIONS** 316L stainless steel, EB-5 cleaning stainless steel diaphragm D Helium Leak Test MONEL®, INCONEL® Ε Pressure Test Certificate Certificate of Conformity F diaphragm G **CMTR** HASTELLOY® C, 6 INCONEL® diaphragm **VOLTAGE** C 316L stainless steel, 5 Steam INCONEL® diaphragm THERMISTOR TYPE **PORT CONFIGURATION -**Steam 5 Standard Body "A" (One inlet **CONTROLLER TYPE** Port and One Outlet Port) 5 Steam For more configurations, **HEATER WATTAGE** see pages 47-48 5 Steam PROCESS PORT TYPE TEMPERATURE RANGE U 1/8" FNPT Steam 5 1/4" FNPT 1 CAP ASSEMBLY (2ND STAGE) SEAT MATERIAL (1ST STAGE) Tamper-proof, stainless Tefzel® Α steel Ceramic Filled PTFE В Tamper-proof, panel Н **PCTFE** mount, stainless steel Q PEEK™ Tamper-proof, captured vent, stainless steel FLOW COEFFICIENT (CV) (1ST STAGE) **OUTPUT RANGE (2ND STAGE)** C 0.025 0-10 psig 3 0.06 0-25 psig 5 0.2 0-50 psig CAP ASSEMBLY (1ST STAGE) 0-100 psig 1 Tamper-proof, stainless steel 0-250 psig Tamper-proof, panel mount, stainless steel 0-500 psig Tamper-proof, captured vent, stainless steel SEAT MATERIAL (2ND STAGE) -Tefzel® Α В Ceramic Filled PTFE Н **PCTFE** PEEK™ FLOW COEFFICIENT (CV) (2ND STAGE) -C 0.025

NOTE: Contact the factory for any additional requirements.

Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATUR		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)

3

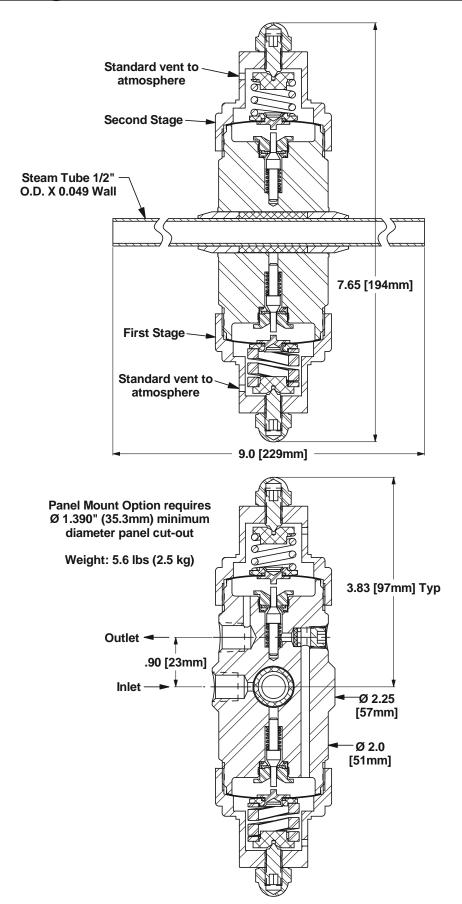
5

0.06

0.2

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
condulet 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)



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

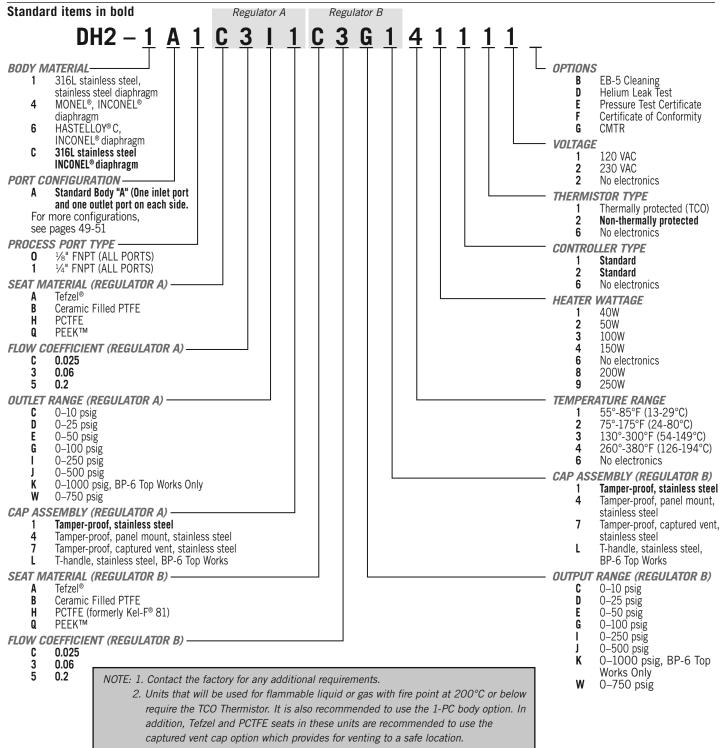
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CONSTRUCTION	316L stainless steel
OUTLET PRESSURES	0-10, 0-25, 0-50, 0-100, 0-250, and 0-500 psig
OPERATING TEMPERATURE	up to 380° F (193° C)
HEATING CAPACITY RANGES (IN WATTS)	40, 50, 100, and 150
C _V COEFFICIENTS	0.06, 0.025, 0.2
CERTIFICATIONS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

Features & Benefits

- Optional HASTELLOY® C-276 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 230VAC
- Optional TCO heating cartridge for T3 rating
- INCONEL® diaphragm standard

regulators

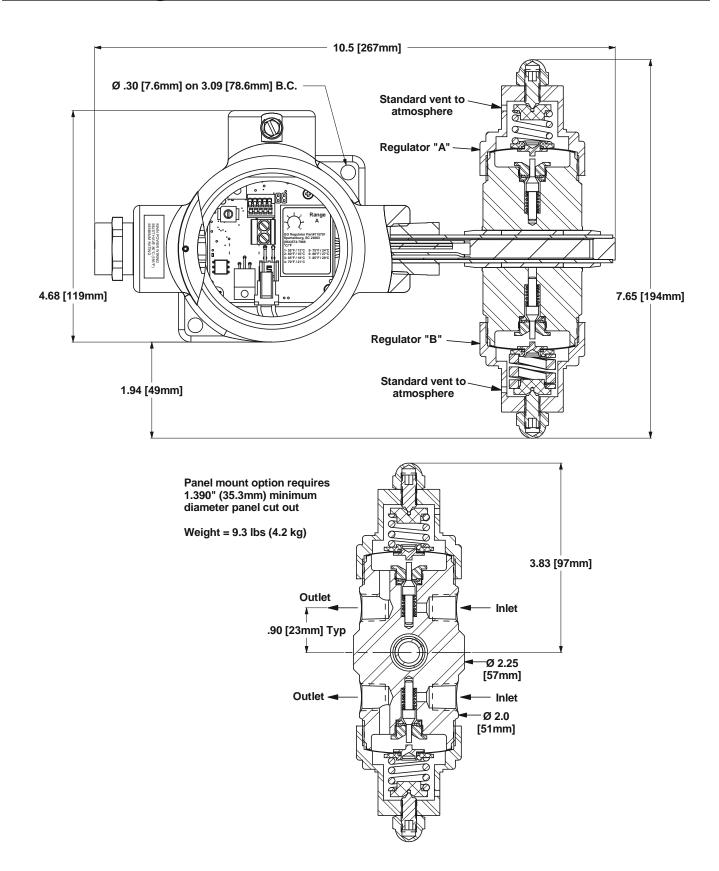
How to Order



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)
	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)

Outline and Mounting Dimensions



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.

Typical Applications

Analytical process sample conditioning systems:

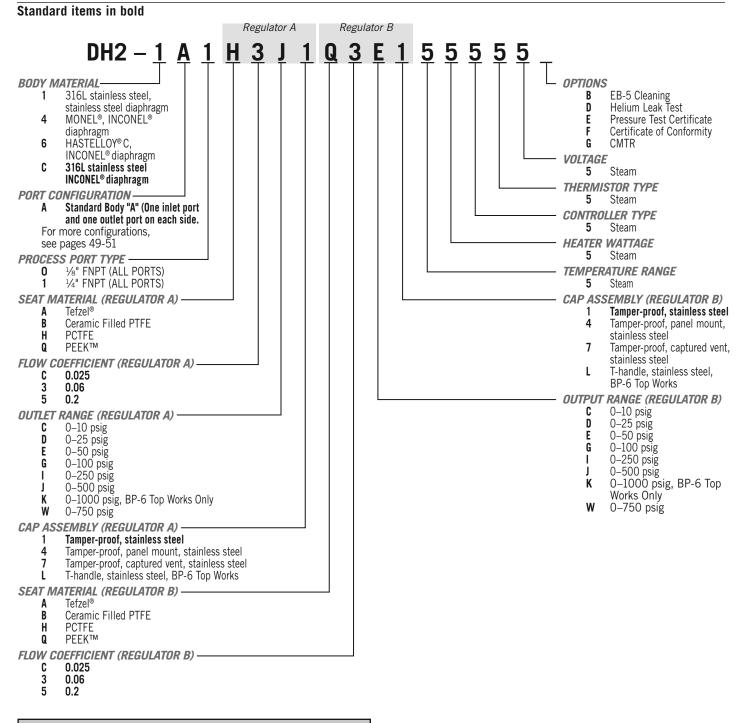
- Petrochemical refineries
- Chemical production facilities
- Pilot plants (chemical & petrochemical)
- LNG loading and off-loading points
- Natural gas pipeline sampling

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
OPERATING TEMPERATURE	up to 500° F (260° C)
C _V COEFFICIENTS	0.06, 0.025, 0.2

- Optional HASTELLOY® C-276 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
- INCONEL® diaphragm standard

How to Order

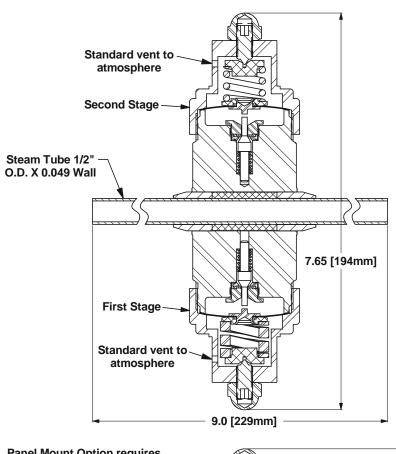


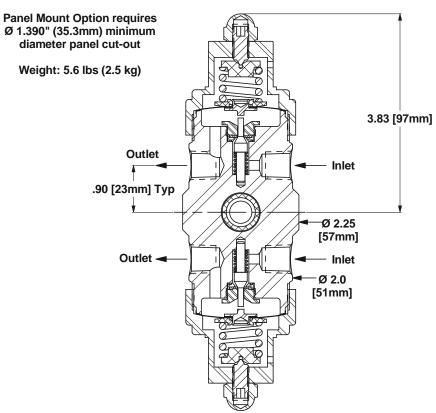
NOTE: Contact the factory for any additional requirements.

Maximum Temperature & Operating Inlet Pressures

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

Outline and Mounting Dimensions





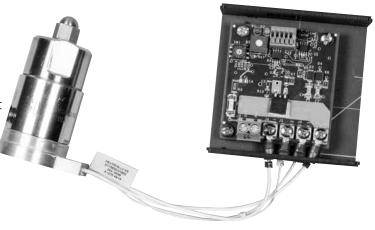
MV-2 Series

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.



pressure

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

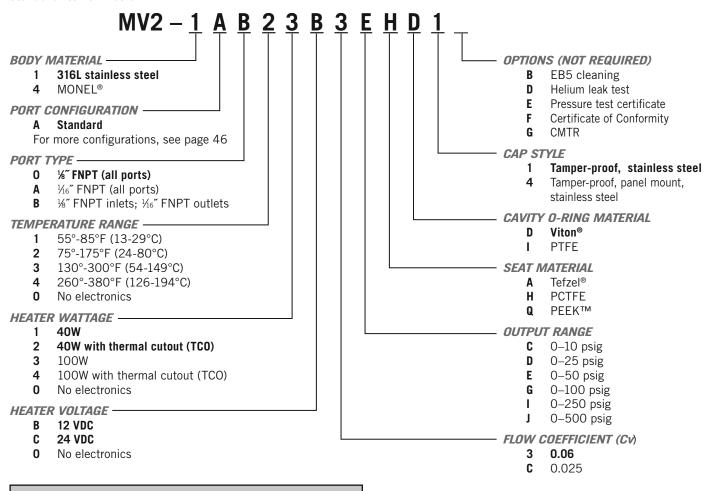
Features & Benefits

- 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

regulators

How to Order

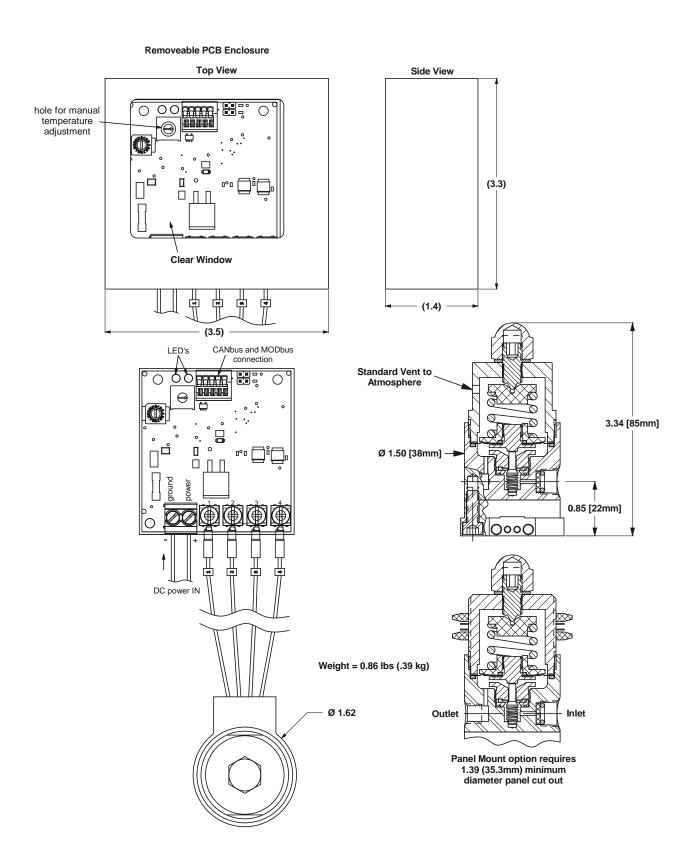
Standard items in bold



NOTE: Contact the factory for any additional requirements.

Maximum Temperature & Operating Inlet Pressures

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



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.



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
Cv COFFFICIENTS	0.025

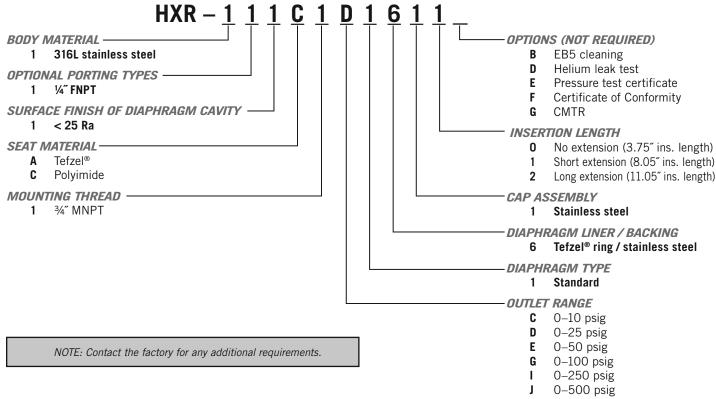
- Prevents liquid carry over
- Insitu design allows for easy installation directly into process line
- Ensures a more representative and accurate sample analysis of process streams
- Electropolished body with better than 25 Ra finish in diaphragm cavity
- Bubble-tight shutoff
- Available in ¾" MNPT probe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

To Order, contact your local Distributor Link below: www.goreg.com/distributor/index.htm

Verify that your chosen part number is valid using the GO Wizards at www.goreg.com/products/matrix/index.htm

How to Order

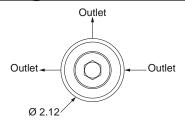
Standard items in bold



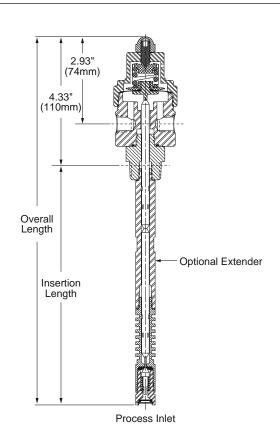
Maximum Temperature & Operating Inlet Pressures

ı	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.

Typical Applications

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

	Technica	Data 🗕 🤅	Steam	Heat	ed
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CONSTRUCTION	316L stainless steel			
OUTLET PRESSURES	0-10, 0-25, 0-50, 0-100, 0-250, and 0-500 psig			
INLET PRESSURE	up to 3600 psig at 380° F (193° C)			
OPERATING TEMPERATURE	up to 500 F (260° C)			
INLET CONNECTIONS	½″ FNPT			
OUTLET CONNECTIONS	1/4" FNPT			



Features & Benefits

- Optional HASTELLOY® C-276 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 and steam-heated
- Optional TCO heating cartridge for T3 operation
- INCONEL® diaphragm standard

Technical Data – Electrically Heated

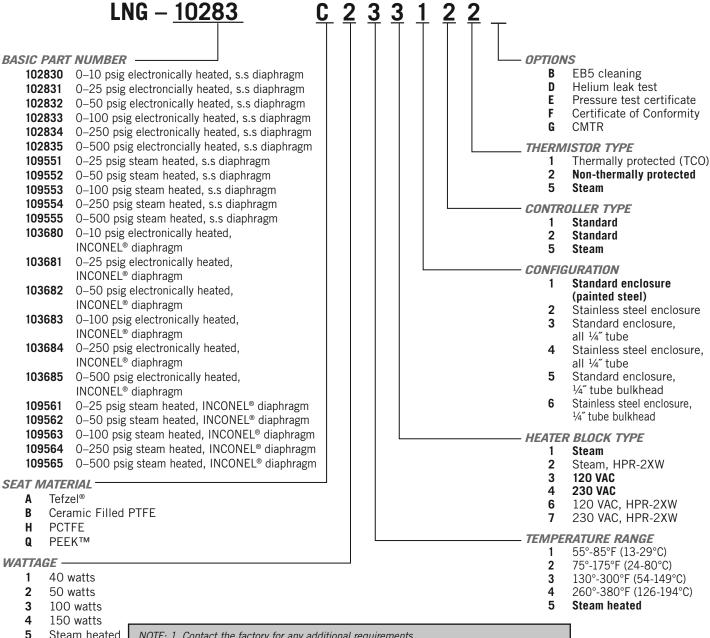
CONSTRUCTION	316L stainless steel			
OUTLET PRESSURES	0-10, 0-25, 0-50, 0-100, 0-250, and 0-500 psig			
INLET PRESSURE	up to 3600 psig at 380° F (193° C)			
HEATING CAPACITY RANGES (IN WATTS)	40, 50, 100, and 150			
CERTIFICATIONS	CSA certification # LR-82566-5 ATEX Directive 2014/34/EU Certification # TRL03ATEX11001X			

To Order, contact your local Distributor Link below: www.goreg.com/distributor/index.htm

Verify that your chosen part number is valid using the GO Wizards at www.goreg.com/products/matrix/index.htm

How to Order

Standard items in bold



- Steam heated 8
- 200 watts 9 250 watts

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 HPR-2 Steam

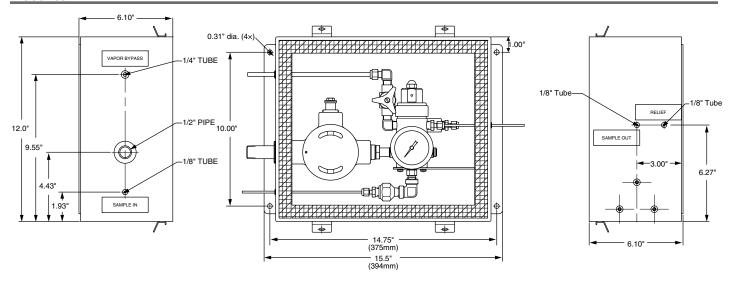
SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE
	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
Tefzel® Ceramic Filled PTFE	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
& PCTFE	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PEEK™	Up to 380° F (193° C)	@	3600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

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

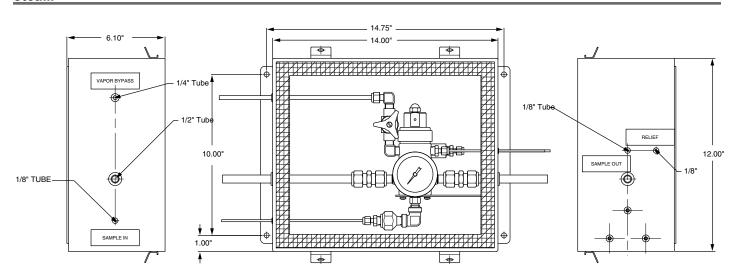
LNG Series

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 condulet 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).

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

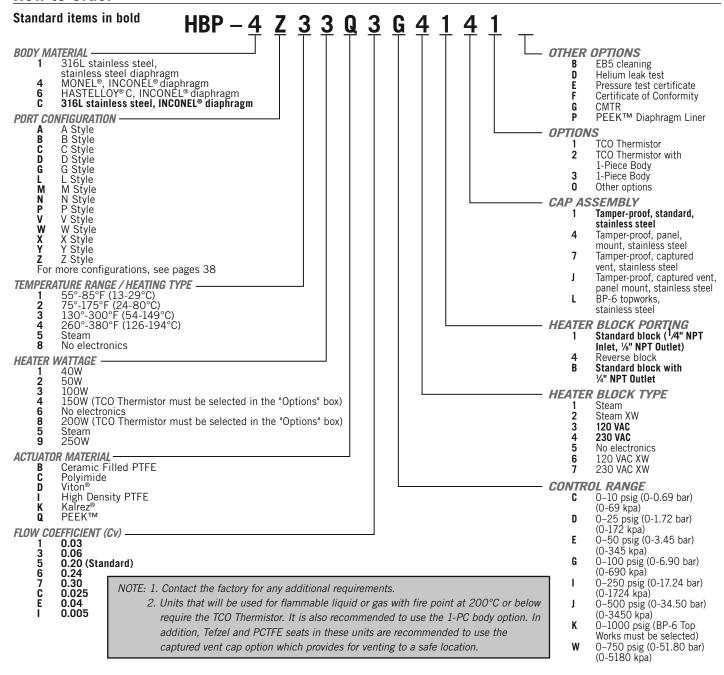
CONSTRUCTION	316L stainless steel		
CONTROL PRESSURES	0-10, 0-25, 0-50, 0-100, 0-250, 0-500, 0-750 and 0-1000 psig		
HEATING CAPACITY RANGES (IN WATTS)	50, 100, 150, 200 and 250		
C _V COEFFICIENT	0.2, others available		
CERTIFICATIONS	CSA certification # LR-82566-5 ATEX Directive 2014/34/EU Certification # TRI 03ATEX11001X		

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

sure regulators

How to Order



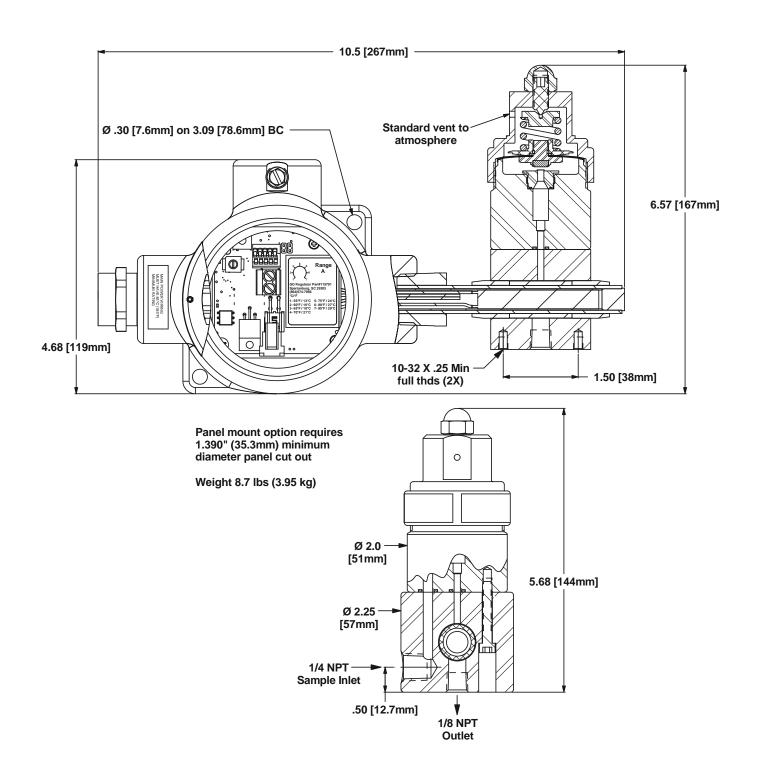
Maximum Temperature & Operating Inlet Pressures

HRP Flectric 1 & 2-Piece Rody

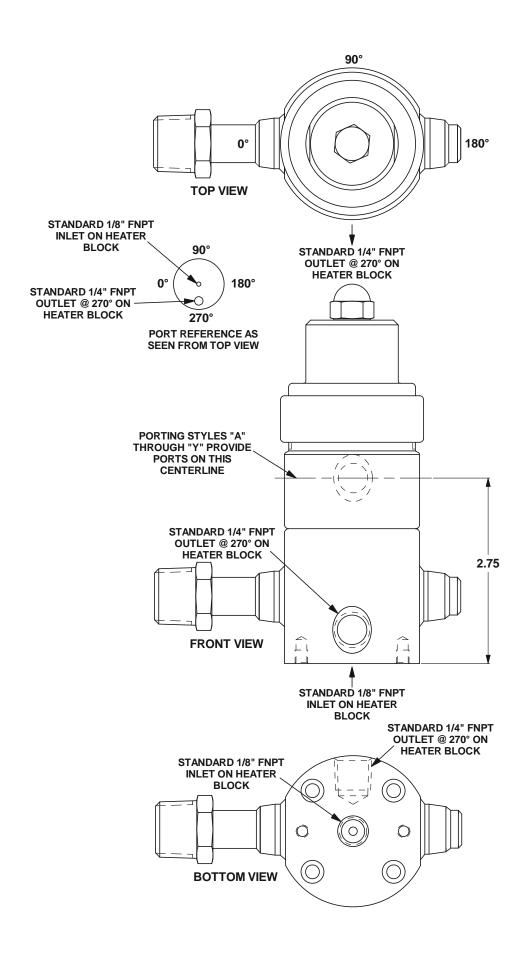
nor Electric, I & 2-riece bouy				
SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE	
	Up to 175°F (79°C)	@	3600 psig (24.82 MPa)	
Viton [®]	176°F to 300°F (80°C to 148°C)	@	Not Available	
	301°F to 380°F (149°C to 193°C)	@	Not Available	
High Doneity	Up to 175°F (79°C)	@	500 psig (3.45 MPa)	
High Density PTFE	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	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)	
PTFE	301°F to 380°F (149°C to 193°C)	@	Not Available	
	Up to 175°F (79°C)	@	250 psig (1.72 MPa)	
Kalrez	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

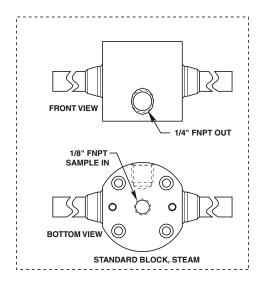
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SEAT MATERIAL	MAXIMUM TEMPERATURE	@	MAXIMUM OPERATING INLET PRESSURE	
Viton [®]	Not Available	@	Not Available	
High Density PTFE	Not Available	@	Not Available	
Ceramic Filled PTFE	Up to 380° F (193° C)	@	250 psig (1.72 MPa)	
Kalrez	Up to 380° F (193° 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)	

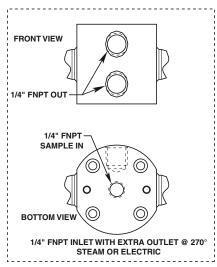


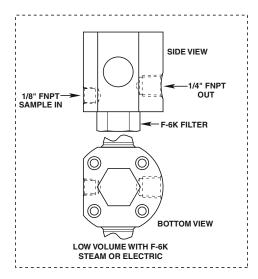
HPR-2 Electric Port References

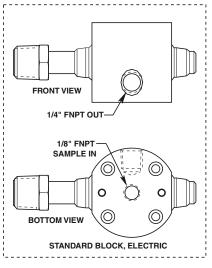


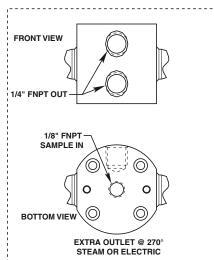
Heater Block Configurations for HPR-2 Steam & Electric and HPR-2XW Steam & Electric Series

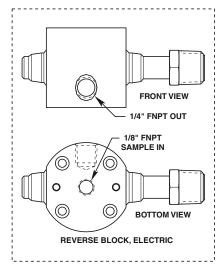


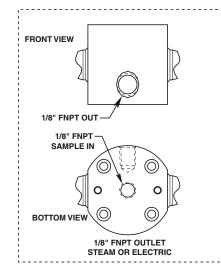


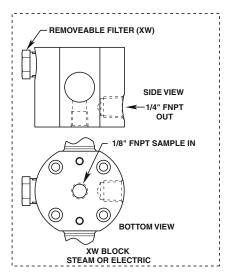


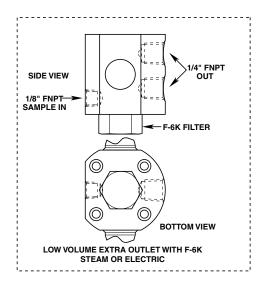


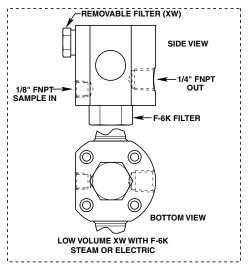


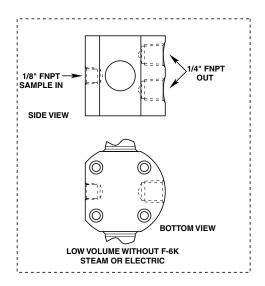


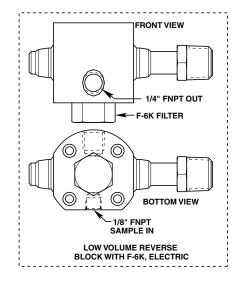




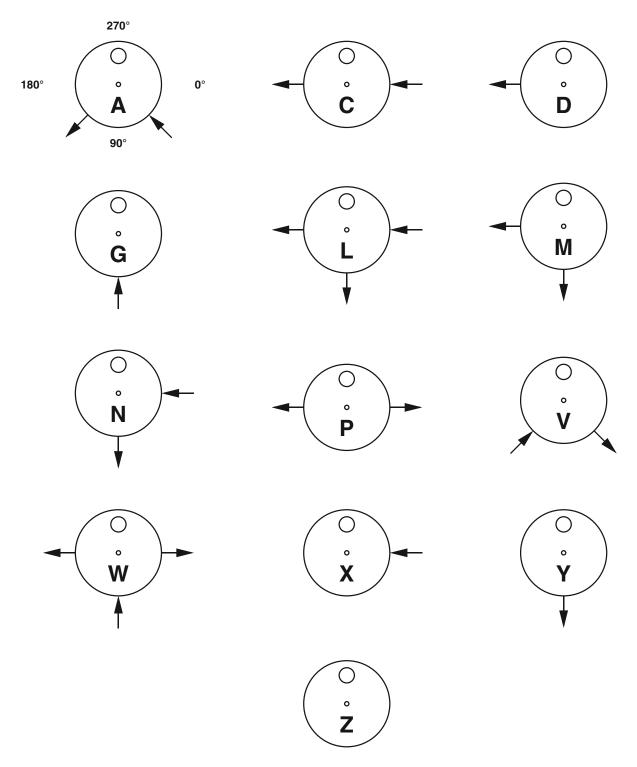




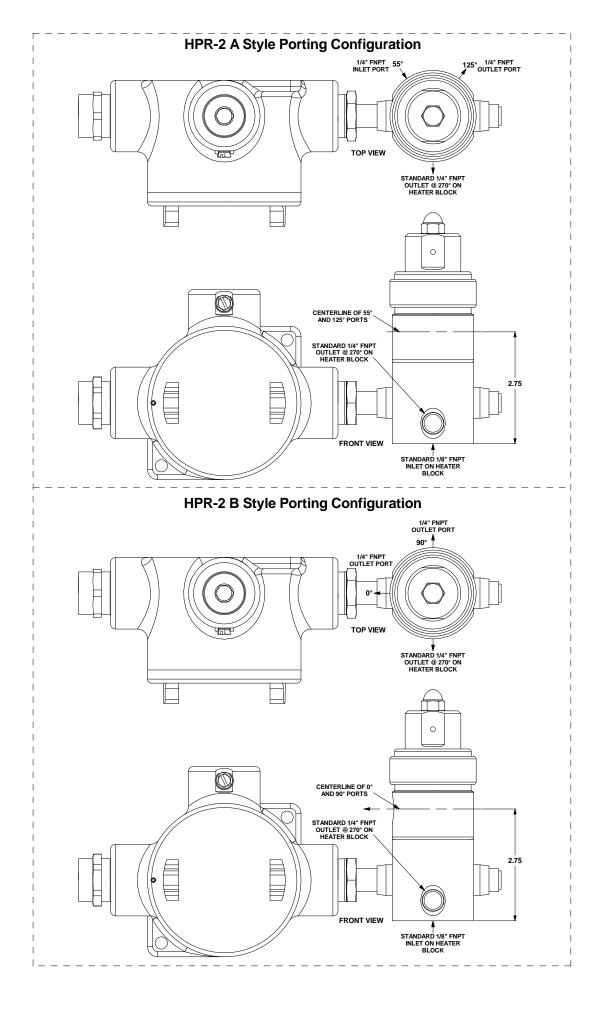


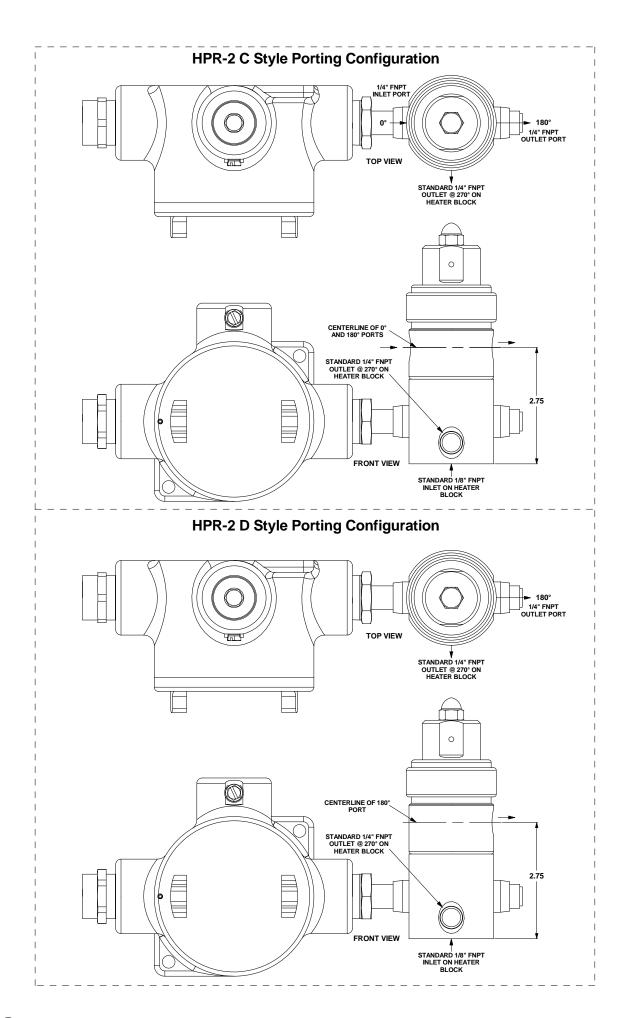


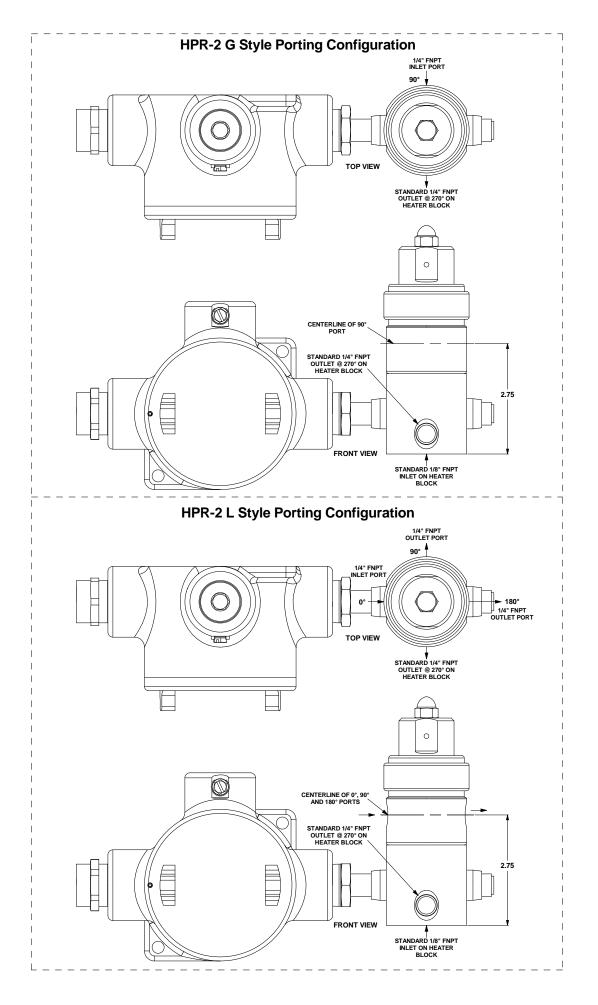
Porting Configurations (Pressure Regulator Body) for HPR-2 Steam & Electric, HPR-2XW Steam & Electric Series and HBP Steam & Electric.

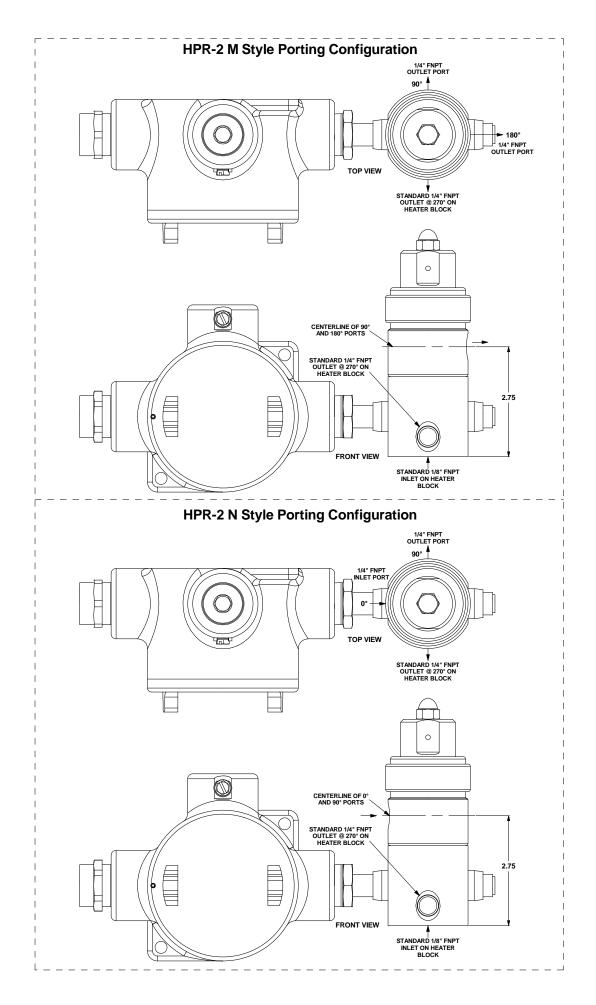


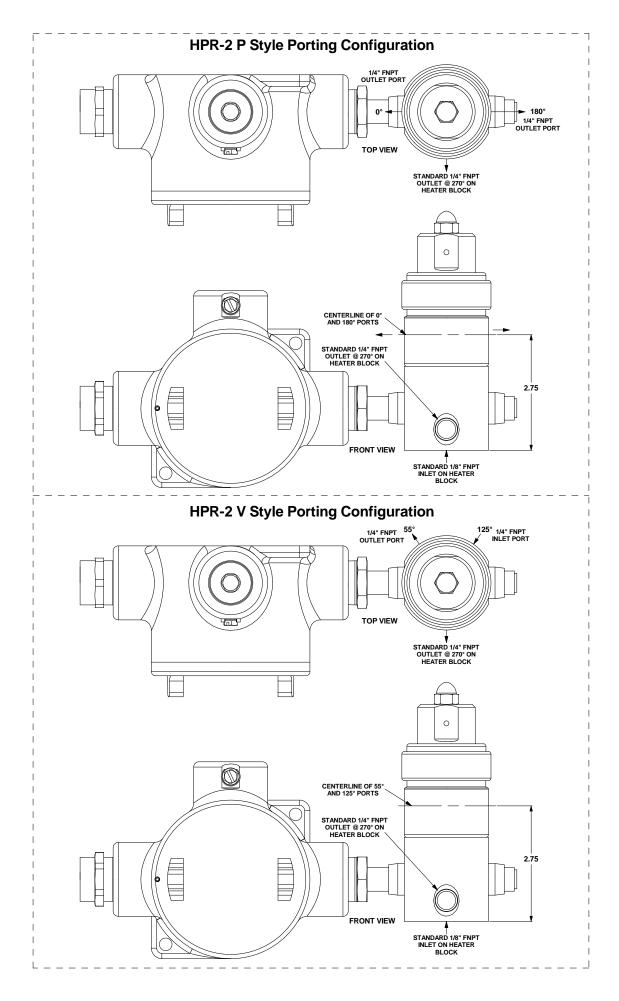
Location of ports from top view. Arrow pointing toward body is inlet. Arrow pointing away from body is outlet.

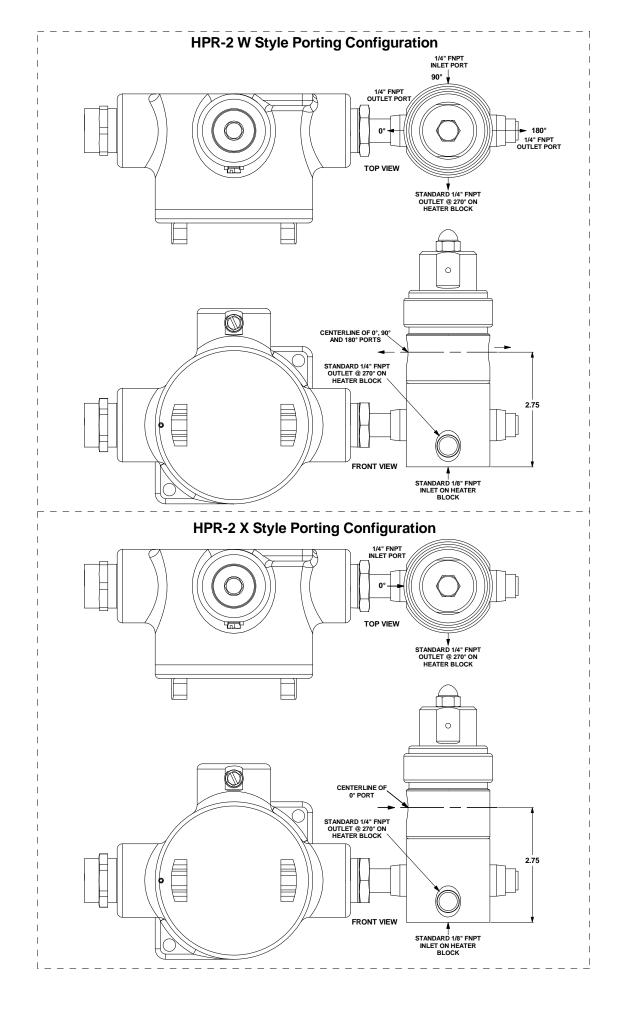


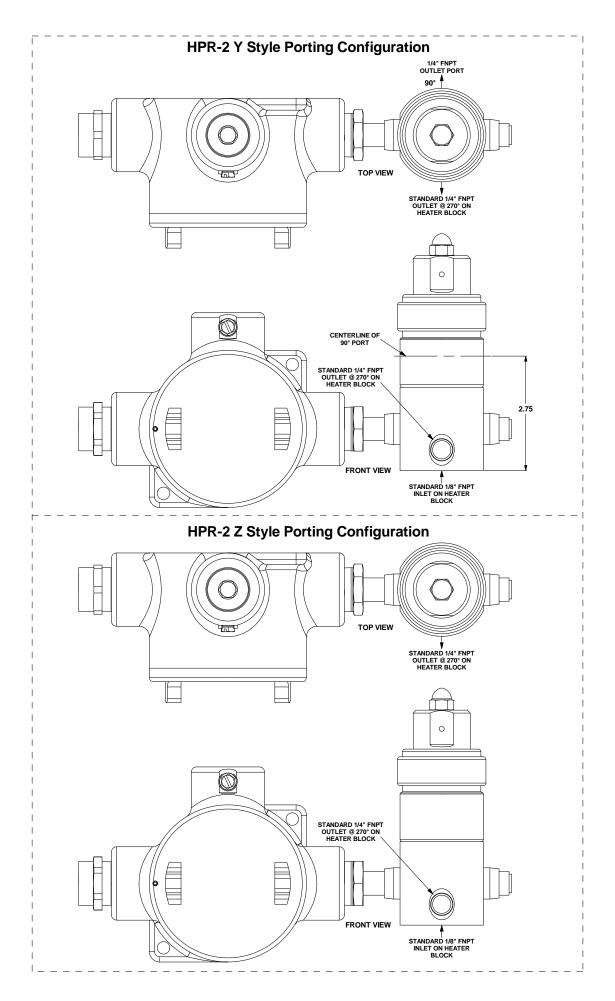




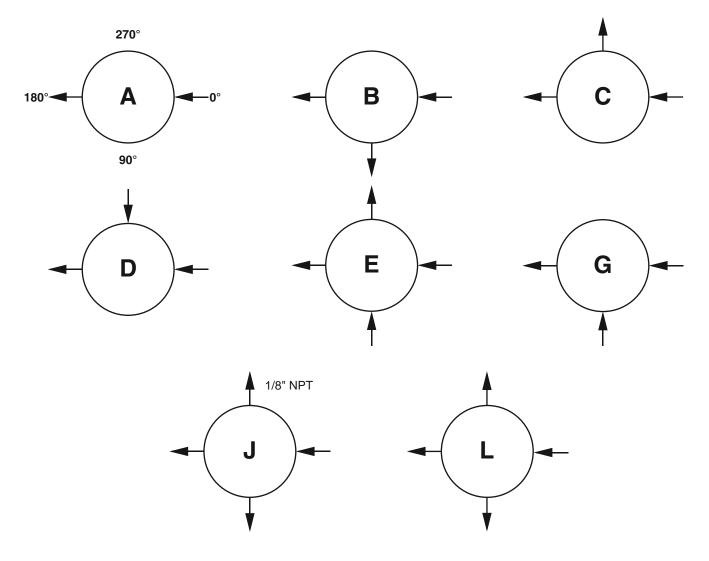






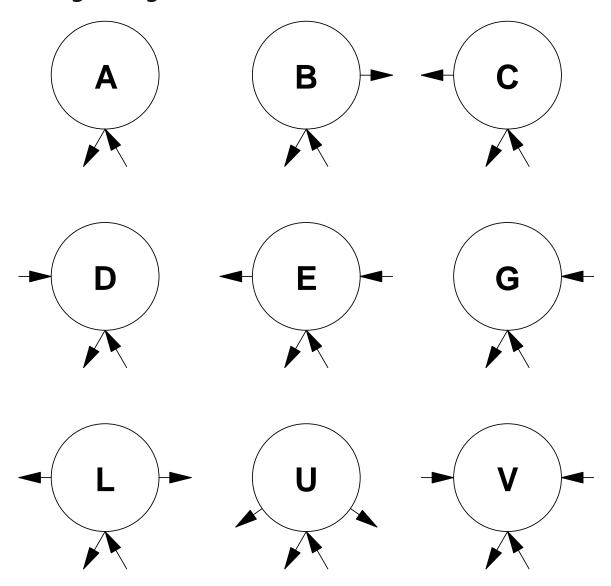


Porting Configurations for MV-2 Series



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

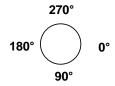
CV2 Porting Configurations



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

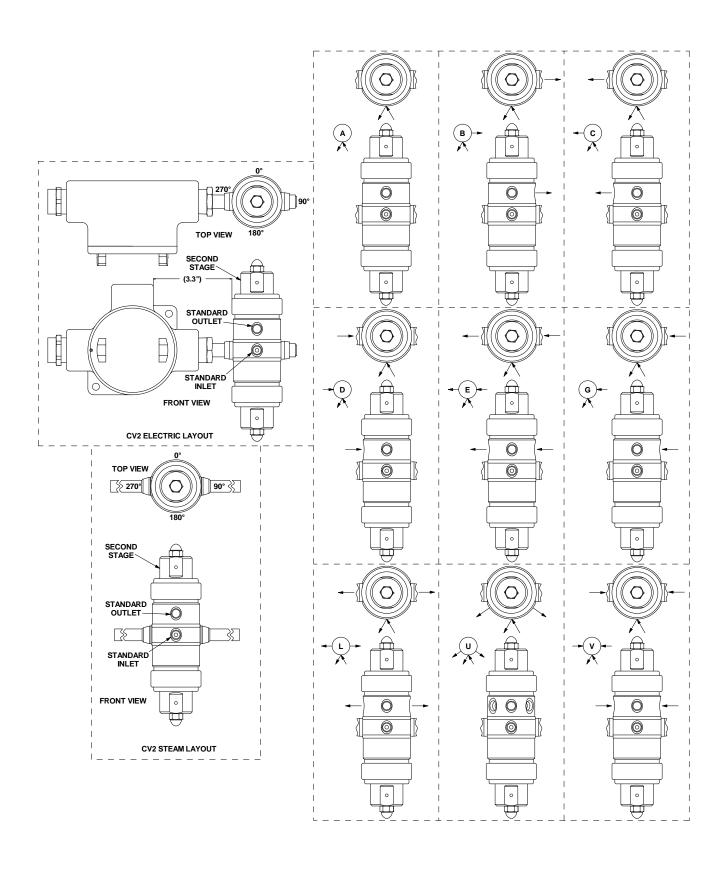
90° ports are standard inlet and outlet ports, see graphic view.

REFERENCE CLOCK

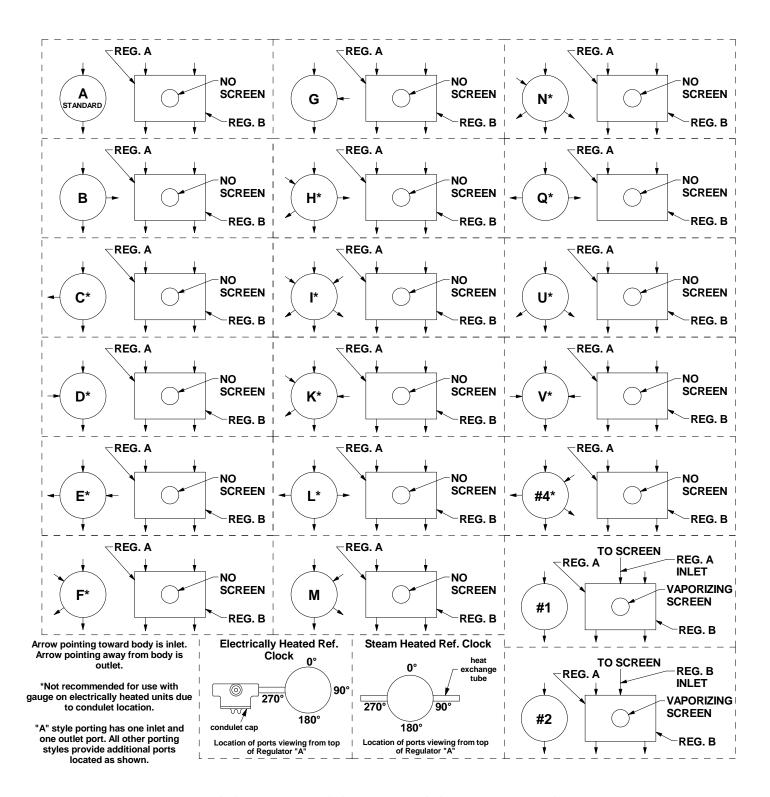


LOCATION OF PORTS FROM TOP OF SECOND STAGE

CV2 Porting Configurations

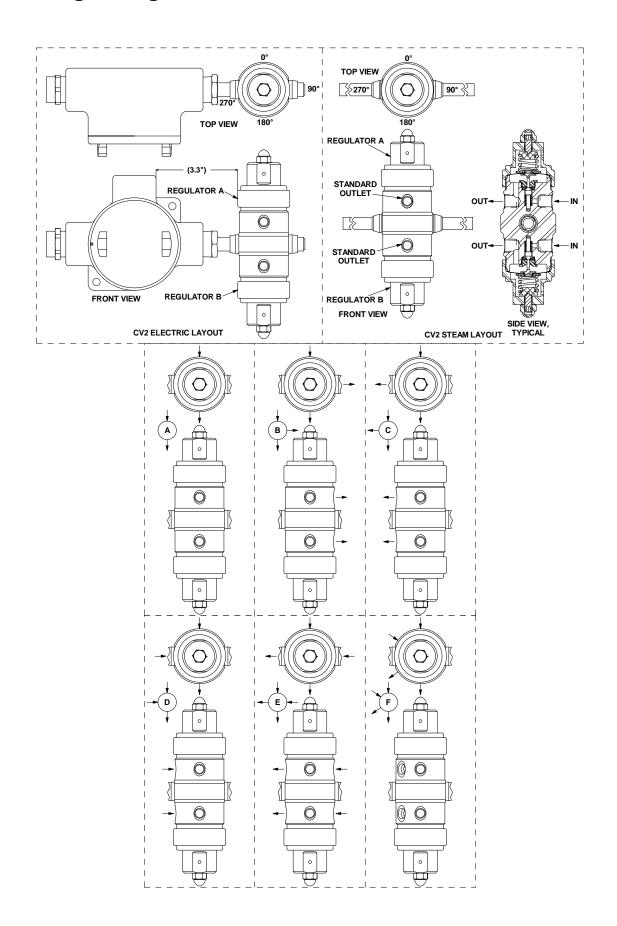


Porting Configurations for DH2 Steam & Electric Series

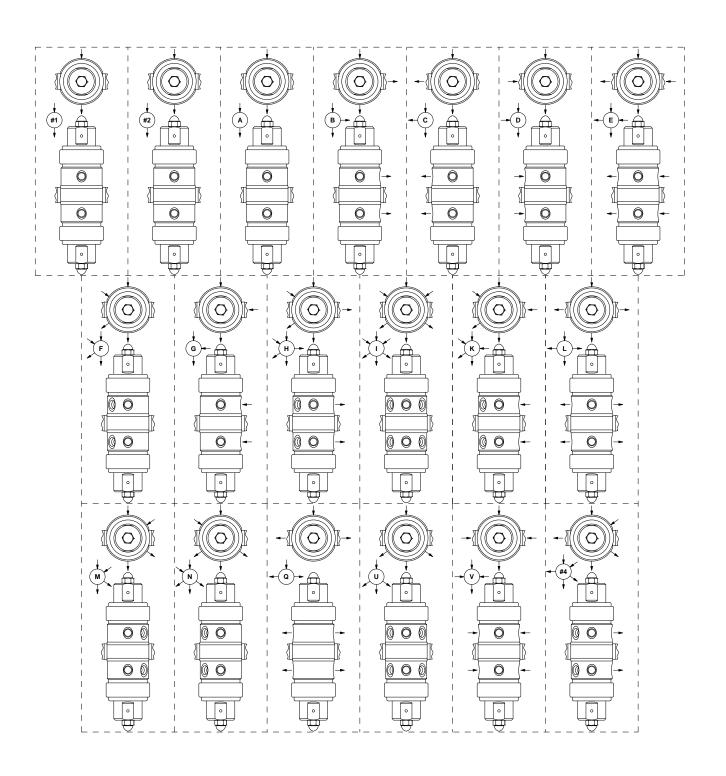


Arrow pointing toward body is inlet. Arrow pointing away from body is outlet.

DH2 Porting Configurations continued



DH2 Porting Configurations continued



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