



GO REGULATOR

HPR-2 Steam Heated Regulators

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 careful design forces all sample flow to pass through the element.

Features & Specifications

- 316L stainless steel construction
- Optional Hastelloy C and Monel
- Electropolished body with better than 25 Ra finish in diaphragm cavity
- Steam temperatures up to 550° F (285° C)
- Bubble tight shutoff
- Outlet pressures 0–10, 0–25, 0–50, 0–100, 0–250 and 0-500 psig
- 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
- Inlet pressure up to 6000 psig at 380° F (193° C)
- C_v flow coefficients of 0.06, 0.025, 0.2
- Standard inlet connection 1/8" FNPT
- Outlet connection 1/4" FNPT

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HPR-2 Steam Heated Regulators

How to Order

See page 23 for standard configurations. For additional configurations, consult the factory.
Port locations see pages 34 and 36.

Maximum Temperature & Operating Inlet Pressures

HPR-2 Steam 2 Piece Assembly
(Heater Block and Regulator Body Separate)

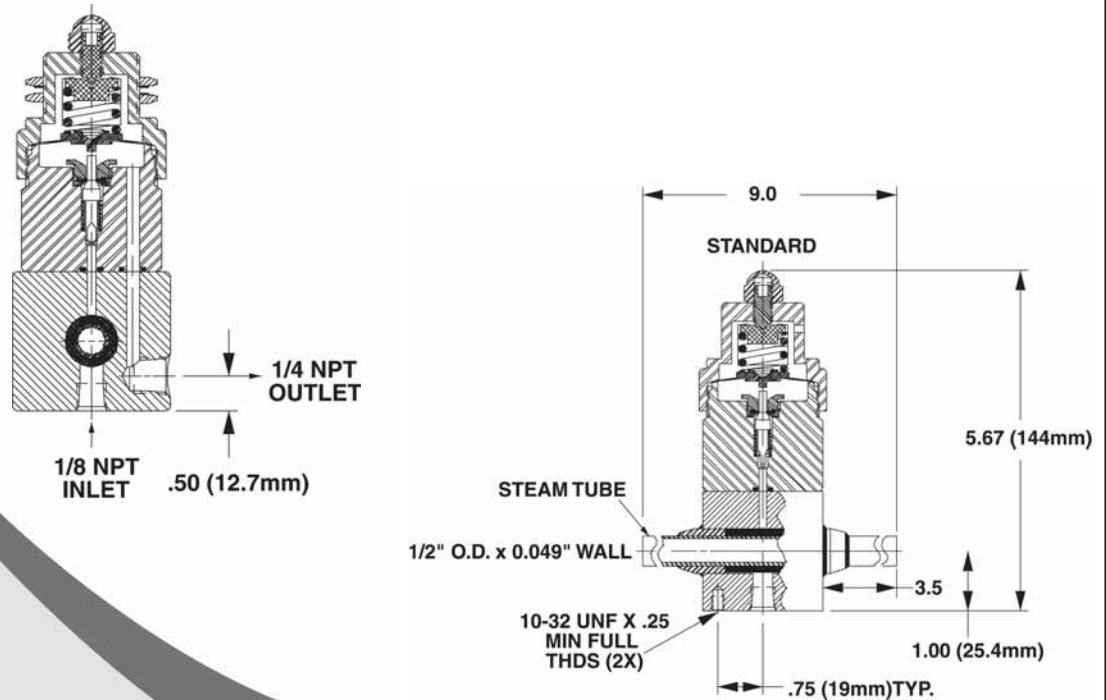
Seat Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
PEEK	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)

HPR-2 Steam 1 Piece Assembly
(Integral Heater Block and Regulator)

Seat Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)
PEEK	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

Tefzel® and Teflon® are registered trademarks of Dupont.

Outline and Mounting Dimensions





GO REGULATOR

HPR-2

Electrically Heated Regulators

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 careful design forces all sample flow to pass through the element.

The HPR-2 Series of vaporizing pressure reducing regulators enjoy both CSA and KEMA (Cenelec) approvals. The electrical components of this unit are securely housed in a Class A, B, C, D conduit assuring that there is always an adequate flame path between the environment and the controller. Safety considerations can be further enhanced by using the optional TCO (Thermal Cut Out) heater cartridge and proportional controller. These features enable the unit to boast a T3 rating with 150 watts of power.

Features & Specifications

- 316L stainless steel construction
- Optional Hastelloy C and Monel
- Electropolished body with better than 25 Ra finish in diaphragm cavity
- Operating temperatures up to 380° F (193° C)
- Bubble tight shutoff
- Outlet pressures 0–10, 0–25, 0–50, 0–100, 0–250, and 0–500 psig
- 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 110VAC or 240VAC
- Heating capacity ranges are 40, 50, 100 and 150 watts
- Optional TCO heating cartridge and proportional controller
- CSA certification # LR-82566-5
- KEMA certification # Ex-96.D.1862
- C_v flow coefficients of 0.06, 0.025, 0.2

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HPR-2 Electrically Heated Regulators

How to Order

See page 24 for standard configurations. For additional configurations, consult the factory.
Port locations, see pages 34 and 36.

Maximum Temperature & Operating Inlet Pressures

HPR-2 Electric 2 Piece Assembly
(Heater Block and Regulator Body Separate)

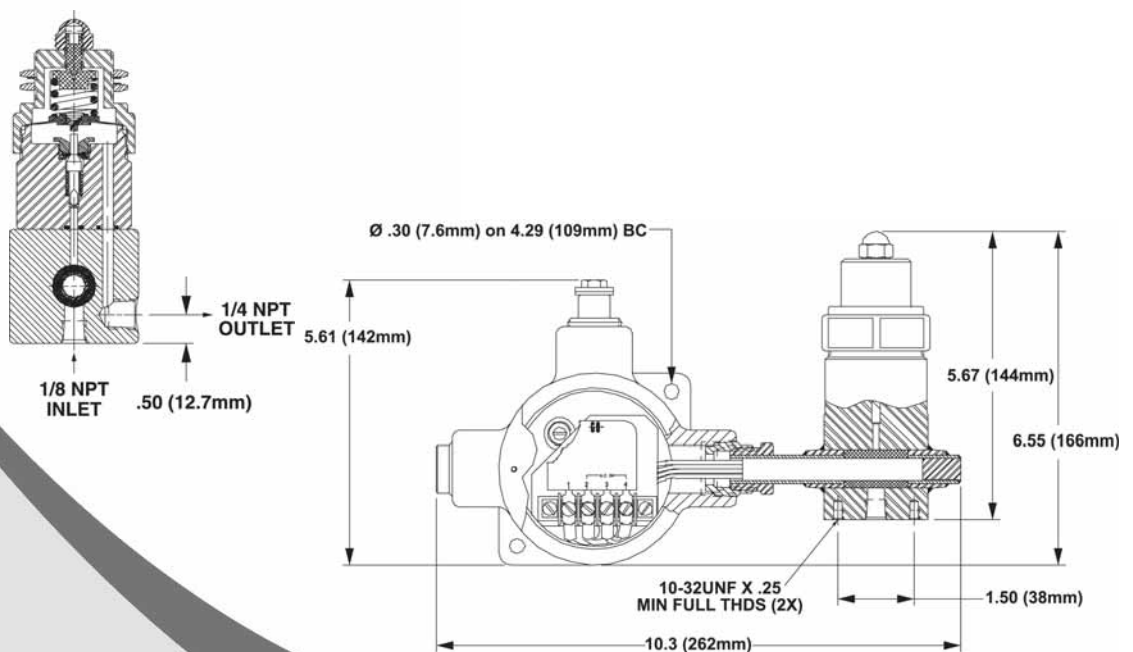
Seat Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
PEEK	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)

HPR-2 Electric 1 Piece Assembly
(Integral Heater Block and Regulator)

Seat Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)
PEEK	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

Tefzel® and Teflon® are registered trademarks of Dupont.

Outline and Mounting Dimensions





GO REGULATOR

HPR-2XW Series

Steam Heated Pressure Regulators

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 careful 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.

Features & Specifications

- 316L stainless steel construction
- Optional Hastelloy C and Monel
- Electropolished body with better than 25 Ra finish in diaphragm cavity
- Steam temperatures up to 550° F (285° C)
- Bubble tight shutoff
- Outlet pressures 0–10, 0–25, 0–50, 0–100, 0–250 and 0–500 psig
- 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
- Inlet pressure up to 6000 psig at 380° F (193° C)
- C_v flow coefficients of 0.06, 0.025, 0.2
- Standard inlet connection 1/8" FNPT
- Outlet connection 1/4" FNPT

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HPR2-XW Steam Heated Pressure Regulators

How to Order

See page 25 for standard configurations. Consult factory for additional configurations. Port locations see pages 34 and 36.

Maximum Temperature & Operating Inlet Pressures

HPR-2XW Steam 2 Piece Assembly
(Heater Block and Regulator Body Separate)

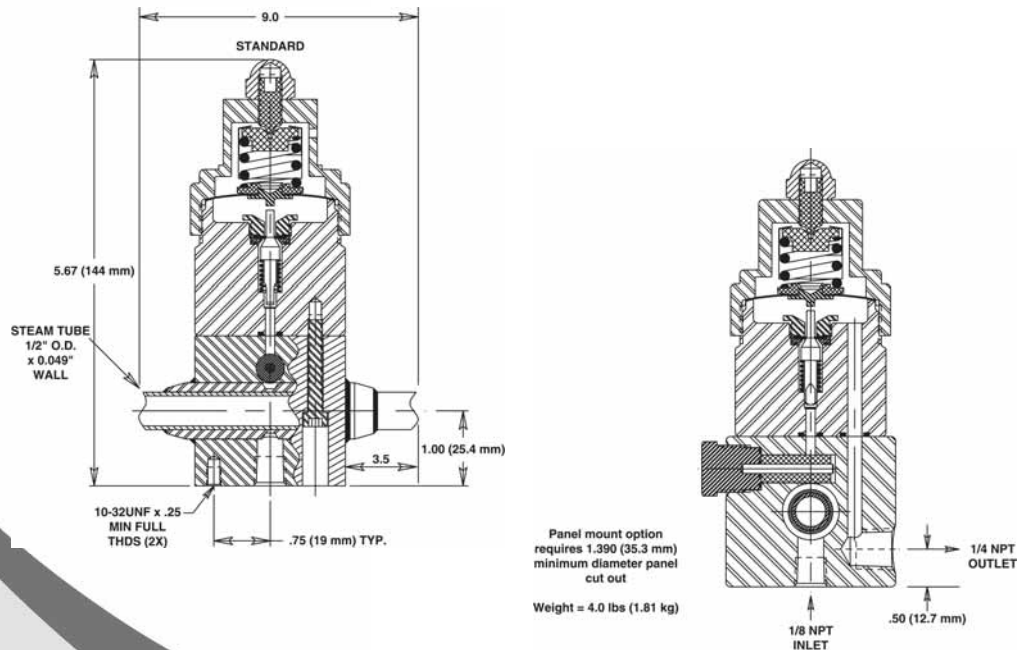
Seat Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
PEEK	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)

HPR-2XW Steam 1 Piece Assembly
(Integral Heater Block and Regulator)

Seat Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)
PEEK	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

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Outline and Mounting Dimensions





GO REGULATOR

HPR-2XW Series

Electrically Heated Pressure Regulators

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 careful 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 enjoy both CSA and KEMA (Cenelec) approvals. The electrical components of this unit are securely housed in a Class A,B,C,D conduit assuring that there is always an adequate flame path between the environment and the controller. Safety considerations can be further enhanced by using the optional TCO (Thermal Cut Out) heater cartridge and proportional controller. These features enable the unit to boast a T3 rating with 150 watts of power.

Features & Specifications

- 316L stainless steel construction
- Optional Hastelloy C & Monel
- Electropolished body with better than 25 Ra finish in diaphragm cavity
- Operating temperatures up to 380° F (193° C)
- Bubble tight shutoff
- Outlet pressures 0–10, 0–25, 0–50, 0–100, 0–250 and 0–500 psig
- 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 110VAC or 240VAC
- Heating capacity ranges are 40, 50, 100 and 150 watts
- Optional TCO heating cartridge and proportional controller
- CSA certification # LR-82566-5
- KEMA certification # Ex-96.D.1862
- C_v flow coefficients of 0.06, 0.025, 0.2

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HPR-2XW Electrically Heated Regulators

How to Order

See page 26 for standard configurations. Consult factory for additional configurations. Port locations, see pages 34 and 36.

Maximum Temperature & Operating Inlet Pressures

HPR-2XW Electric 2 Piece Assembly

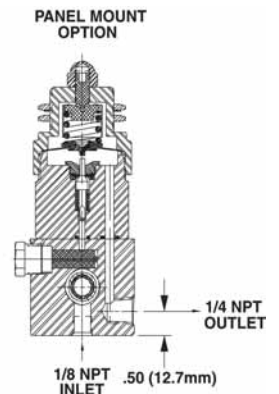
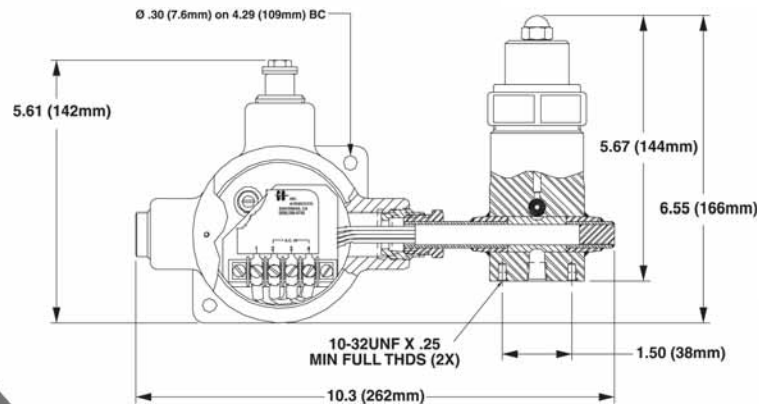
Seal Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
PEEK	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)

HPR-2XW Electric 1 Piece Assembly

Seal Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)
PEEK	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

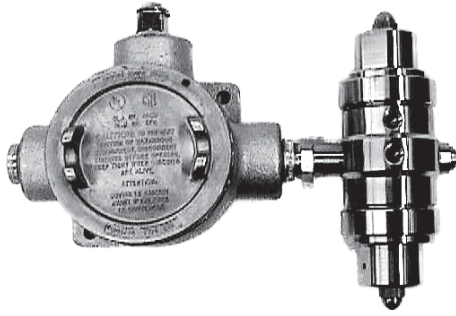
Tefzel® and Teflon® are registered trademarks of Dupont.

Outline and Mounting Dimensions



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

Weight - 8.7 lbs (3.95 kg)



GO REGULATOR Cylinder Vaporizer Electrically Heated Two Stage Pressure Regulators

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

The design of the CV Series consists of heat exchanger and pressure control sections. The pressure control sections are patterned after the time proven design of the CYL-20 Two-Stage Pressure Reducing Regulator and provides the same excellent outlet pressure stability. The heat exchange element uses GO Regulator's unique spiral wrapped screen as the heat exchange surface. This screen has up to 100 square inches of heat transfer area and careful design forces all sample flow to pass through the element.

The Cylinder Vaporizer Series of vaporizing pressure reducing regulators are KEMA (Cenelec) approvals. The electrical components of this unit are securely housed in a Class A, B, C, D conduit assuring that there is always an adequate flame path between the environment and the controller. Safety considerations can be further enhanced by using the optional TCO (Thermal Cut Out) heater cartridge and proportional controller. These features enable the unit to boast a T3 rating with 150 watts of power.

Features & Specifications

- 316L stainless steel construction
- Hastelloy C and Monel optional
- Electropolished body with better than 25 Ra finish in diaphragm cavity
- Operating temperatures up to 380° F (193° C)
- Bubble tight shutoff
- Outlet pressures 0–10, 0–25, 0–50, 0–100, 0–250 and 0–500 psig
- Unique spiral wrapped heat exchange element provides up to 100 square inches of heat transfer area
- Available in 110VAC or 240VAC
- Heating capacity ranges are 40, 50, 100 and 150 watts
- Optional TCO heating cartridge and proportional controller
- KEMA certification # EX-96.D.1862
- C_v flow coefficients of 0.06, 0.025, 0.2

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Cylinder Vaporizer Electrically Heated Two Stage Pressure Regulators

How to Order

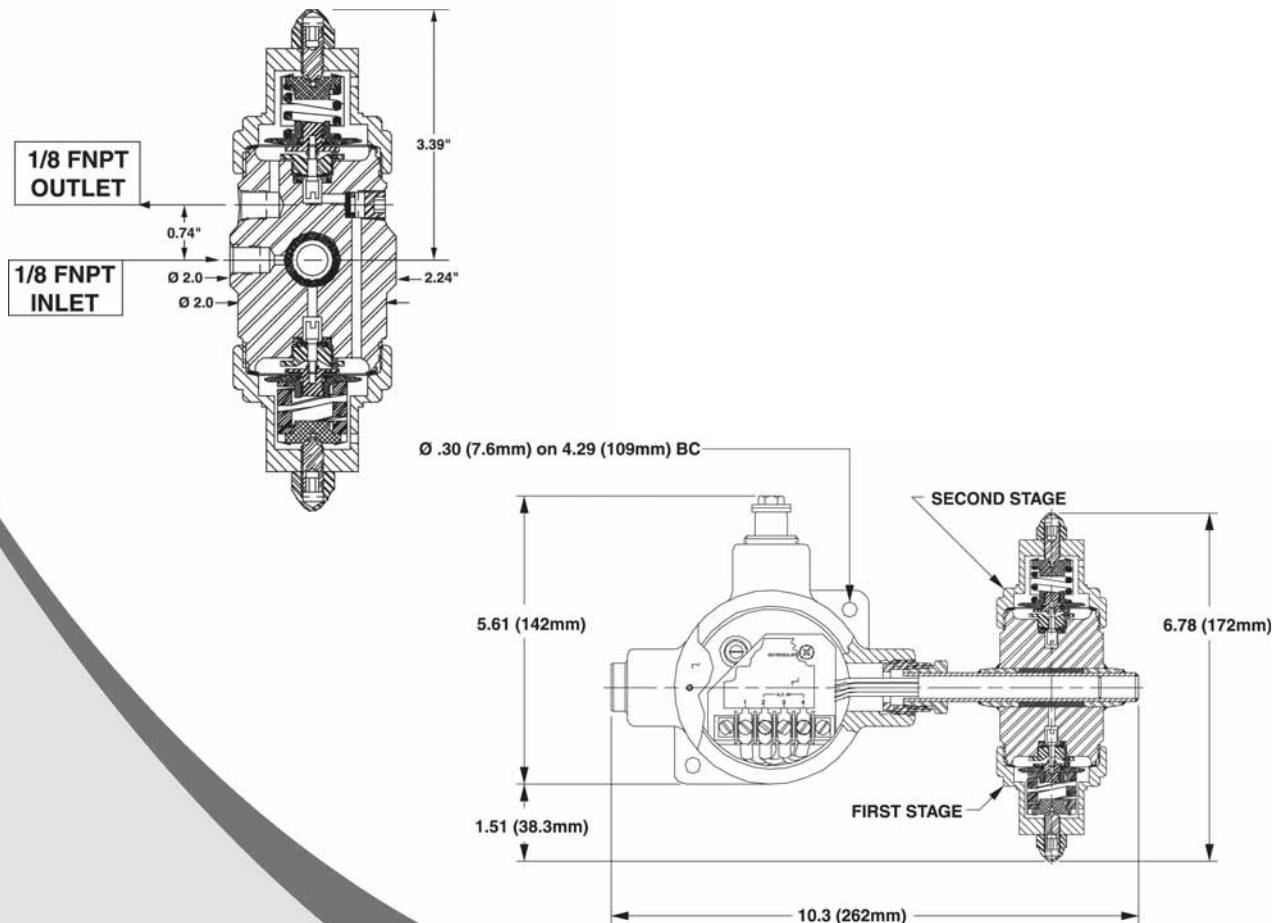
See page 27 for standard configurations. Consult factory for additional configurations.

Maximum Temperature & Operating Inlet Pressures

Seat Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175°F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)
PEEK	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

Tefzel® and Teflon® are registered trademarks of Dupont.

Outline and Mounting Dimensions





GO REGULATOR

Cylinder Vaporizer Steam Heated Two Stage Pressure Regulators

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 careful design forces all sample flow to pass through the element.

Features & Specifications

- 316L stainless steel construction
- Optional Hastelloy C and Monel
- Electropolished body with better than 25 Ra finish in diaphragm cavity
- Steam temperatures up to 550° F (285° C)
- Bubble tight shutoff
- Outlet pressure 0–10, 0–25, 0–50, 0–100, 0–250 and 0–500 psig
- Unique spiral wrapped heat exchange element provides up to 100 square inches of heat transfer area
- C_v flow coefficients of 0.06, 0.025, 0.2

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Cylinder Vaporizer Steam Heated Two Stage Pressure Regulators

How to Order

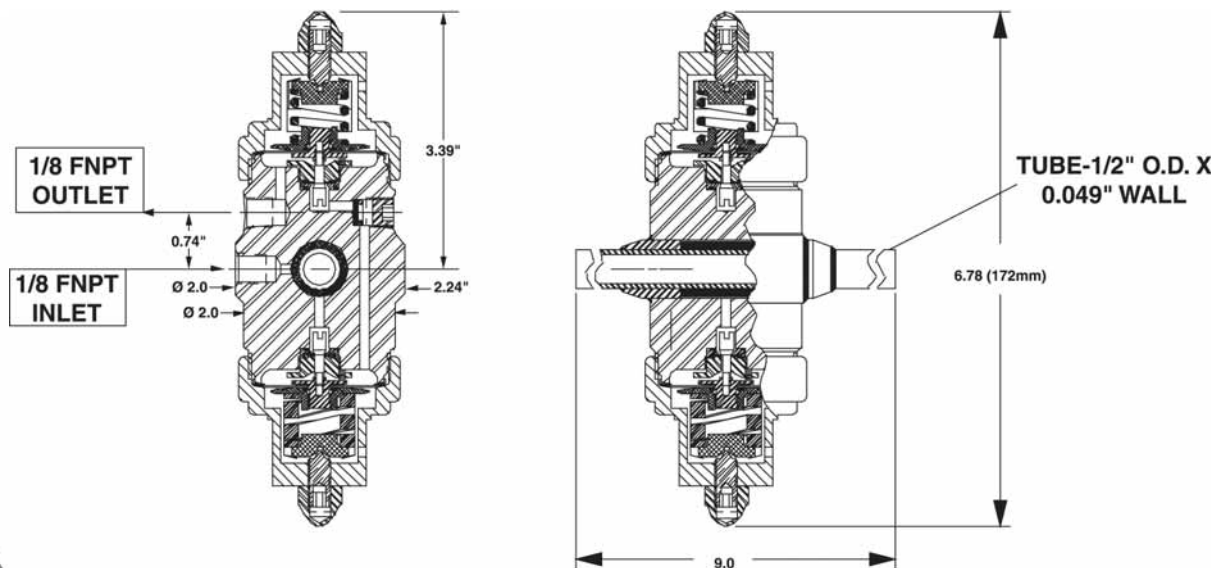
See page 28 for standard configurations. Consult factory for additional configurations.

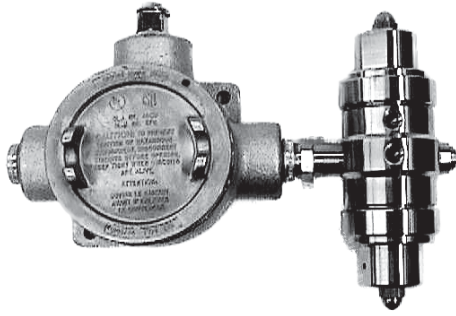
Maximum Temperature & Operating Inlet Pressures

Seat Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175°F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)
PEEK	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

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Outline and Mounting Dimensions





GO REGULATOR

Electrically Heated Dual Pressure Regulators

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 discreet 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 KEMA (Cenelec) approved. The electrical components of this unit are securely housed in a Class A, B, C, D conduit assuring that there is always an adequate flame path between the environment and the controller. Safety considerations can be further enhanced by using the optional TCO (Thermal Cut Out) heater cartridge and proportional controller. These features enable the unit to boast a T3 rating with 150 watts of power!

Features & Specifications

- 316L stainless steel construction
- Optional Hastelloy C and Monel
- Electropolished body with better than 25 Ra finish in diaphragm cavity
- Operating temperatures up to 380° F (193° C)
- Bubble tight shutoff
- Outlet pressure ranges are 0–10, 0–25, 0–50, 0–100, 0–250 and 0–500 psig
- Available in 110VAC or 240VAC
- Heating capacity ranges are 40, 50, 100 and 150 watts
- Optional TCO heating cartridge and proportional controller
- KEMA certification # Ex-96.D.1862
- C_v flow coefficients of 0.06, 0.025, 0.2

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Electrically Heated Dual Pressure Regulators

How to Order

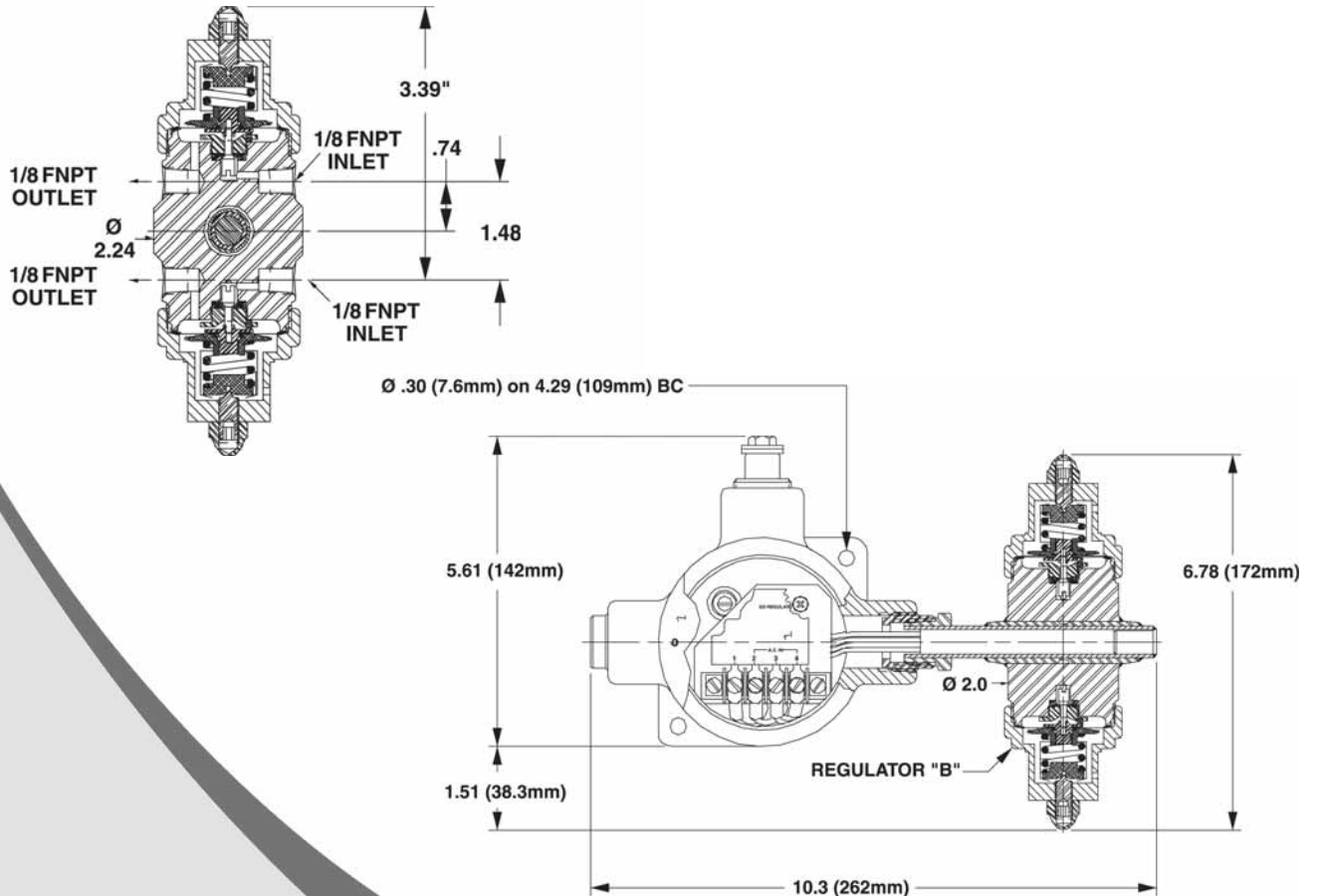
See page 29 for standard configurations. Consult factory for additional configurations.
Port locations, see page 38.

Maximum Temperature & Operating Inlet Pressures

Seat Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)
PEEK	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

Tefzel® and Teflon® are registered trademarks of Dupont.

Outline and Mounting Dimensions





GO REGULATOR

Steam Heated Dual Pressure Regulators

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 discreet 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.

Features & Specifications

- 316L stainless steel construction
- Optional Hastelloy C and Monel
- Electropolished body with better than 25 Ra finish in diaphragm cavity
- Steam temperatures up to 550° F (285° C)
- Bubble tight shutoff
- Outlet pressure ranges are 0–10, 0–25, 0–50, 0–100, 0–250 and 0–500 psig
- Modular pressure control and heat exchanger assemblies for easy maintenance
- C_v flow coefficients of 0.06, 0.025, 0.2

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Steam Heated Dual Pressure Regulators

How to Order

See page 30 for standard configurations. Consult factory for additional configurations.
Port locations, see page 38.

Maximum Temperature & Operating Inlet Pressures

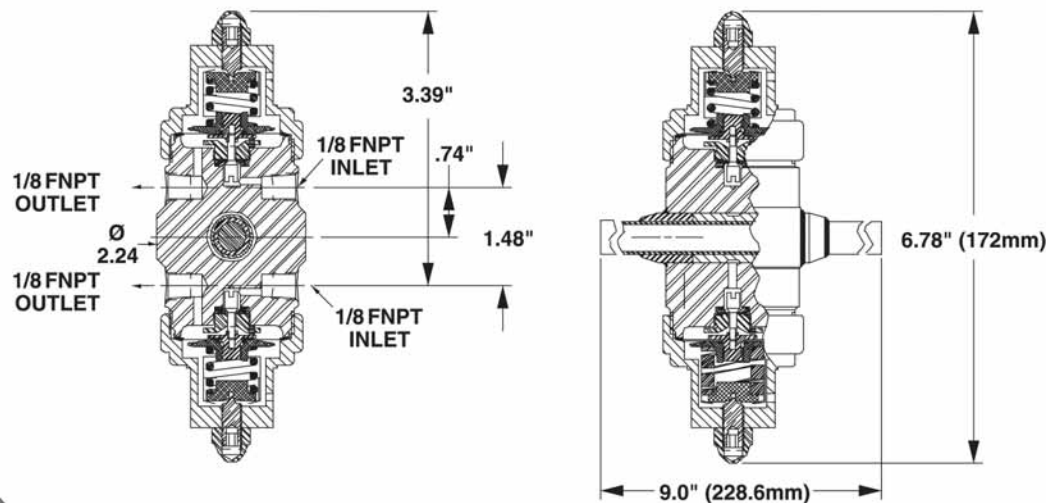
Seat Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175°F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F81)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)
PEEK	Up to 380° F (193° C)	@	6000 psig (41.37 MPa)

Tefzel® and Teflon® are registered trademarks of Dupont.

Outline and Mounting Dimensions

Panel mount option
requires 1.390 (35.3 mm)
minimum diameter panel
cutout

Weight - 4.0 lbs (1.81 kg)



GO REGULATOR

MV-1 Series

Miniature Vaporizing Pressure Regulators



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

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

Features & Specifications

- 316L stainless steel construction
- Electro polished body with better than 25 Ra finish in diaphragm cavity
- Operating temperatures up to 380° F (193° C)
- Bubble tight shutoff
- Outlet pressure ranges are 0–10, 0–25, 0–50, 0–100, 0–250 and 0–500 psig
- Unique *Spiro-Wind* heating element provides exceptionally even heating
- Available in 12 VDC and 24 VDC
- Heating capacity ranges are 40 & 100 watts
- Optional TCO heating cartridge and proportional controller

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MV-1 Series

Miniature Vaporizing Pressure Regulators

How to Order

See page 31 for standard configurations. Consult factory for additional configurations. Port locations, see page 35.

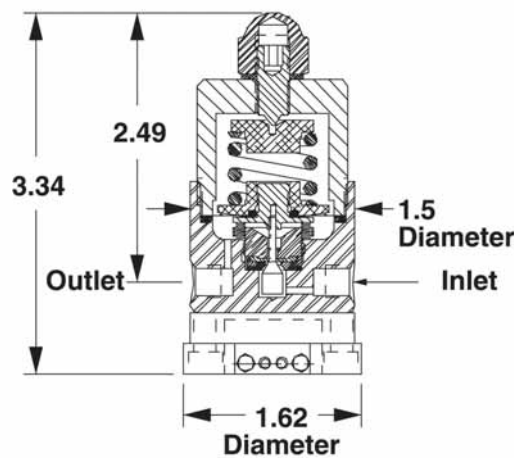
Maximum Temperature & Operating Inlet Pressures

Seat Material	Maximum Temperature	@	Maximum Operating Inlet Pressure
Tefzel®	Up to 175° F (Up to 80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High Density Teflon®	Up to 175° F (Up to 80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F 81)	Up to 380° F (up to 193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (up to 193° C)	@	3600 psig (24.82 MPa)
PEEK	Up to 380° F (up to 193° C)	@	3600 psig (24.82 MPa)

Tefzel® and Teflon® are registered trademarks of Dupont.

Outline and Mounting Dimensions

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



Weight = 0.86 lbs

Electrical lead
length is 6" ±.25

GO REGULATOR

HXR Series

Insitu Temperature Compensating Pressure Regulators



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

Features & Specifications

- 316L stainless steel construction
- Prevents liquid carry over
- Insitu design allow for easy installation directly into process line
- Ensures a more representative and accurate sample analysis of process streams
- Electro polished body with better than 25 Ra finish in diaphragm cavity
- Bubble tight shutoff
- Maximum inlet working pressure is 3600 psig at maximum temperature
- Outlet pressures 0–10, 0–25, 0–50, 0–100, 0–250 and 0–500 psig
- Available in 1/2", 3/4", and 1" MNPT probe gland connections
- 70 micron filter
- Port sizes & configuration 1/4" FNPT – 3 low pressure ports situated 90° apart
- C_v flow coefficient 0.025
- Optional probe lengths available
- Optional gauge and relief valve

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HXR Series

How to Order

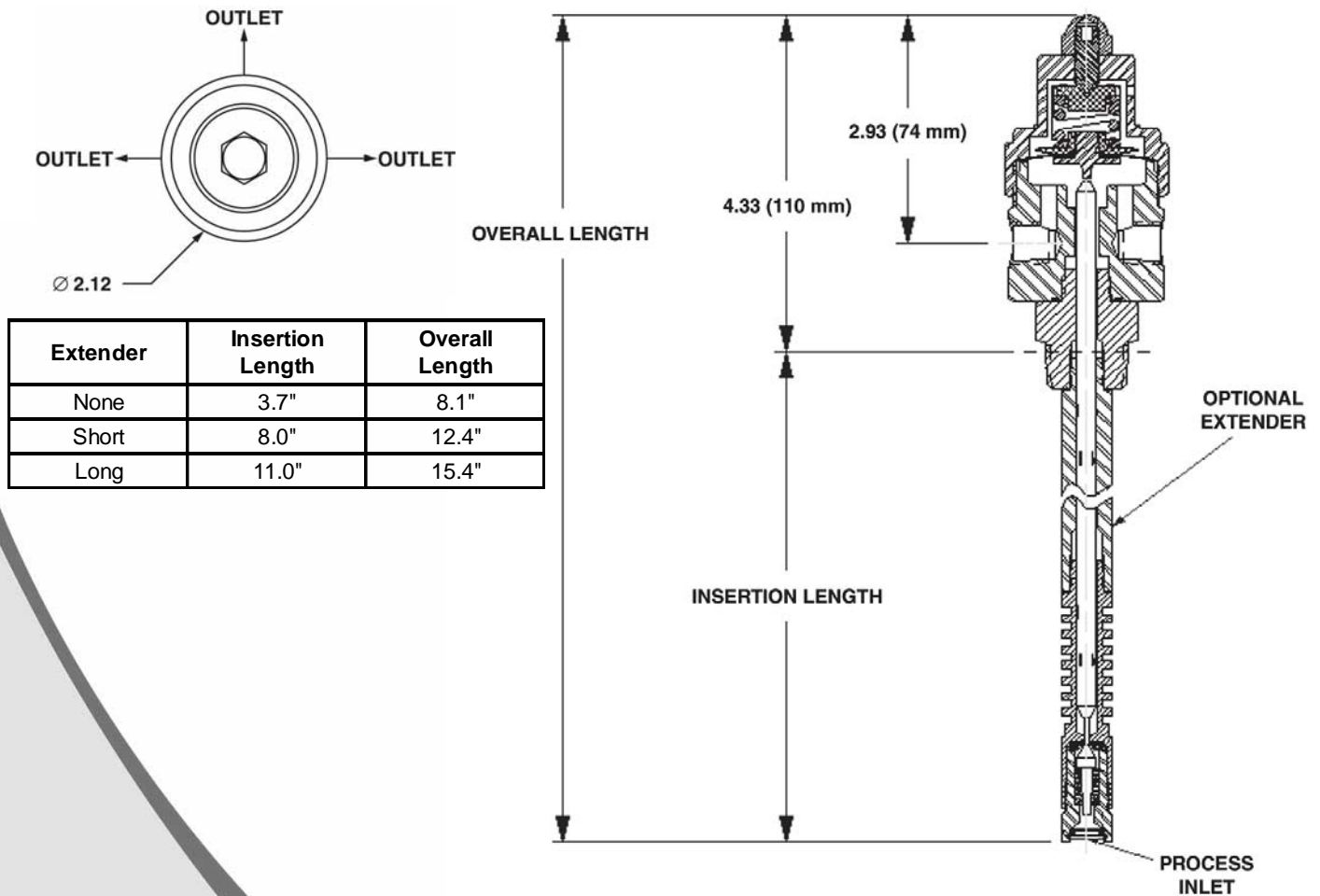
See page 32 for standard configurations. Consult factory for additional configurations.

Maximum Temperature & Operating Inlet Pressures

Seat Material	Maximum Temperature*	@	Maximum Operating Inlet Pressure
Tefzel®	150° F (66° C)	@	3600 psig (20.68 MPa)
High Density Teflon®	150° F (66° C)	@	3600 psig (20.68 MPa)
PCTFE (formerly Kel-F-81)	175° F (80° C)	@	3600 psig (20.68 MPa)
Polyimide	500° F (260° C)	@	3600 psig (20.68 MPa)
PEEK	500° F (260° C)	@	3600 psig (20.68 MPa)

Tefzel® and Teflon® are registered trademarks of Dupont Corporation.

Outline and Mounting Dimensions





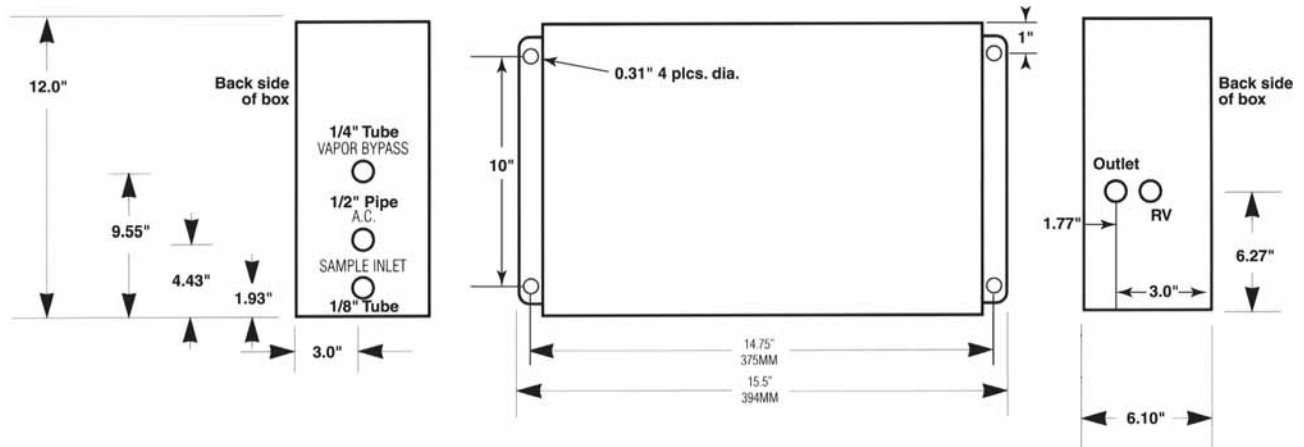
GO REGULATOR

LNG Sample Vaporizers

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 sample 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.

Outline and Mounting Dimensions for Electrical Version



How to Order

See page 33 for standard configurations. Consult factory for additional configurations.

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HPR-2 Steam Heated Vaporizing Regulators

Material of Body	
1	SS 316L
4	Monel
Port Configuration (page 34) STANDARD BODY "Z" (ONE INLET PORT AND ONE OUTLET PORT)	
Z	
Temperature Range/Heating Type	
5	Steam
Heater Wattage	
5	Steam
Seat Material	
A	Tefzel
B	CF Teflon
C	Polyimide
H	PCTFE (formerly Kel-F 81)
Q	PEEK
Flow Coefficient (Cv)	
3	0.06
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
Heater Block Type	
1	Steam, Standard
Heater Block Porting (page 36)	
1	Standard Block
2	Extra Outlet Block
Cap Assembly	
1	Tamper Proof, Standard, S.S.
Other Options (Can be left blank)	
4	6000 Psig inlet Steam Heated (1pc assembly)

H 2 -

Material	Port Config.	Temp Range	Heater Wattage	Seat Material	Flow (Cv)	Output Range	Heater Block Type	Htr Block Porting	Cap Assembly	Other Options	

HPR-2 Electrically Heated Vaporizing Regulators

Material of Body	
1	SS 316L
4	Monel
Port Configuration (page 34)	
STANDARD BODY "Z" (ONE INLET PORT AND ONE OUTLET PORT)	
Z	
Temperature Range/Heating Type	
1	55° F - 85° F
2	75° F - 175° F
3	130° F - 300° F
4	260° F - 380° F
Heater Wattage	
1	40W
2	50W
3	100W
4	150W
Seat Material	
A	Tefzel
B	CF Teflon
C	Polyimide
H	PCTFE (formerly Kel-F 81)
Q	PEEK
Flow Coefficient (Cv)	
3	0.06
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
Heater Block Type	
3	110 VAC
4	240 VAC
5	No Electronics
8	Proportional 110 VAC
9	Proportional 240 VAC
Heater Block Porting (page 36)	
1	Standard Block
2	Extra Outlet Block
Cap Assembly	
1	Tamper Proof, Standard, S.S.
4	Tamper Proof, Panel Mount, S.S.
Other Options (Can be left blank)	
1	TCO Thermistor
5	5600 Psig inlet w/ TCO Thermistor (1pc assy.)
7	6000 Psig inlet w/ Standard Thermistor (1pc assy.)



HPR-2XW Steam Heated Vaporizing Regulators

Material of Body	
1	SS 316L
4	Monel
Port Configuration (page 34) STANDARD BODY "Z" (ONE INLET PORT AND ONE OUTLET PORT)	
Z	
Temperature Range/Heating Type	
5	Steam
Heater Wattage	
5	Steam
Seat Material	
A	Tefzel
B	CF Teflon
C	Polyimide
H	PCTFE (formerly Kel-F 81)
Q	PEEK
Flow Coefficient (Cv)	
3	0.06
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
Heater Block Type	
2	Steam, HPR-2XW
Heater Block Porting (page 36)	
1	Standard Block
2	Extra Outlet Block
Cap Assembly	
1	Tamper Proof, Standard, S.S.
Other Options (Can be left blank)	
4	6000 Psig inlet Steam Heated (1pc assembly)

H 2 -

Material	Port Config.	Temp Range	Heater Wattage	Seat Material	Flow (Cv)	Output Range	Heater Block Type	Htr Block Porting	Cap Assembly	Other Options	

HPR-2XW Electrically Heated Vaporizing Regulators

Material of Body	
1	SS 316L
4	Monel
Port Configuration (page 34)	
STANDARD BODY "Z" (ONE INLET PORT AND ONE OUTLET PORT)	
Z	
Temperature Range/Heating Type	
1	55° F - 85° F
2	75° F - 175° F
3	130° F - 300° F
4	260° F - 380° F
Heater Wattage	
1	40W
2	50W
3	100W
4	150W
Seat Material	
A	Tefzel
B	CF Teflon
C	Polyimide
H	PCTFE (formerly Kel-F 81)
Q	PEEK
Flow Coefficient (Cv)	
3	0.06
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
Heater Block Type	
6	110 VAC HPR-2XW
7	240 VAC HPR-2XW
0	Proportional 110 VAC HPR-2XW
A	Proportional 240 VAC HPR-2XW
Heater Block Porting (page 36)	
1	Standard Block
2	Extra Outlet Block
Cap Assembly	
1	Tamper Proof, Standard, S.S.
Other Options (Can be left blank)	
1	TCO Thermistor
5	5600 Psig inlet w/ TCO Thermistor (1pc assy.)
7	6000 Psig inlet w/ Standard Thermistor (1pc assy.)

H 2 -

Material	Port Config.	Temp Range	Heater Wattage	Seat Material	Flow (Cv)	Output Range	Heater Block Type	Htr Block Porting	Cap Assembly	Other Options

CV Two Stage Electrically Heated Vaporizing Regulator

1		SS 316L		Material of Body	
4		Monel			
A		Port Configuration STANDARD BODY "A" (ONE INLET PORT AND ONE OUTLET PORT)			
		Seat Material (1st Stage)			
A		Tefzel			
B		CF Teflon			
C		Polyimide			
H		PCTFE (formerly Kel-F 81)			
Q		PEEK			
3		0.06		Flow Coefficient (Cv) (1st Stage)	
1		Tamper Proof, Standard, S.S.		Cap Assembly (1st Stage)	
4		Tamper Proof, Panel Mount, S.S.			
		Seat Material (2nd Stage)			
A		Tefzel			
B		CF Teflon			
C		Polyimide			
H		PCTFE (formerly Kel-F 81)			
Q		PEEK			
3		0.06		Flow Coefficient (Cv) (2nd Stage)	
C		0 - 10 Psig		Output Range (2nd Stage)	
D		0 - 25 Psig			
E		0 - 50 Psig			
G		0 - 100 Psig			
I		0 - 250 Psig			
J		0 - 500 Psig			
1		Tamper Proof, Standard, S.S.		Cap Assembly (2nd Stage)	
4		Tamper Proof, Panel Mount, S.S.			
1		55° F - 85° F		Temperature Range	
2		75° F - 175° F			
3		130° F - 300° F			
4		260° F - 380° F			
1		40W		Heater Wattage	
2		50W			
3		100W			
4		150W			
1		On / Off		Controller Type	
2		Proportional			
1		Thermally Protected (TCO)		Thermistor Type	
2		Non-Thermally Protected			
1		110 VAC		Voltage	
2		240 VAC			

CV -

Material	Port Config.	Seat Material	Cv Flow	Cap Assembly	Seat Material	Cv Flow	Output Range	Cap Assembly	Temp Range	Heater Wattage	Controller Type	Thermistor Type	Voltage
		1st Stage			2nd Stage								

DHR Dual Electrically Heated Regulator

1		Material of Body													
4		Monel													
A		Port Configuration (page 30) STANDARD BODY "A" (ONE INLET PORT AND ONE OUTLET PORT ON EACH SIDE)													
A		Seat Material (Regulator A)													
A		Tefzel													
B		CF Teflon													
C		Polyimide													
H		PCTFE (formerly Kel-F 81)													
Q		PEEK													
3		Flow Coefficient (Cv) (Regulator A)													
3		0.06													
C		0 - 10 Psig													
D		0 - 25 Psig													
E		0 - 50 Psig													
G		0 - 100 Psig													
I		0 - 250 Psig													
J		0 - 500 Psig													
1		Cap Assembly (Regulator A)													
1		Tamper Proof, Standard, S.S.													
4		Tamper Proof, Panel Mount, S.S.													
A		Seat Material (Regulator B)													
A		Tefzel													
B		CF Teflon													
C		Polyimide													
H		PCTFE (formerly Kel-F 81)													
Q		PEEK													
3		Flow Coefficient (Cv) (Regulator B)													
3		0.06													
C		0 - 10 Psig													
D		0 - 25 Psig													
E		0 - 50 Psig													
G		0 - 100 Psig													
I		0 - 250 Psig													
J		0 - 500 Psig													
1		Cap Assembly (Regulator B)													
1		Tamper Proof, Standard, S.S.													
4		Tamper Proof, Panel Mount, S.S.													
1		Temperature Range													
2		55° F - 85° F													
3		75° F - 175° F													
4		130° F - 300° F													
6		260° F - 380° F													
6		No Electronics													
1		Heater Wattage													
2		40W													
3		50W													
4		100W													
4		150W													
1		Controller Type													
2		On / Off													
2		Proportional													
1		Thermistor Type													
2		Thermally Protected (TCO)													
2		Non-Thermally Protected													
1		Voltage													
2		110 VAC													
2		240 VAC													

D H R -

Material	Port Config.	Seat Material	Cv Flow	Output Range	Cap Assembly	Seat Material	Cv Flow	Output Range	Cap Assembly	Temp Range	Heater Wattage	Controller Type	Thermistor Type	Voltage
		Regulator A				Regulator B								

DHR Dual Steam Heated Regulator

Material of Body														
1	SS 316L													
4	Monel													
Port Configuration (page 38)														
STANDARD BODY "A" (ONE INLET PORT AND ONE OUTLET PORT ON EACH SIDE)														
Seat Material (Regulator A)														
A	Tefzel													
B	CF Teflon													
C	Polyimide													
H	PCTFE (formerly Kel-F 81)													
Q	PEEK													
Flow Coefficient (Cv) (Regulator A)														
3	0.06													
Output Range (Regulator A)														
C	0 - 10 Psig													
D	0 - 25 Psig													
E	0 - 50 Psig													
G	0 - 100 Psig													
I	0 - 250 Psig													
J	0 - 500 Psig													
Cap Assembly (Regulator A)														
1	Tamper Proof, Standard, S.S.													
4	Tamper Proof, Panel Mount, S.S.													
Seat Material (Regulator B)														
A	Tefzel													
B	CF Teflon													
C	Polyimide													
Q	PEEK													
Flow Coefficient (Cv) (Regulator B)														
3	0.06													
Output Range (Regulator B)														
C	0 - 10 Psig													
D	0 - 25 Psig													
E	0 - 50 Psig													
G	0 - 100 Psig													
I	0 - 250 Psig													
J	0 - 500 Psig													
Cap Assembly (Regulator B)														
1	Tamper Proof, Standard, S.S.													
4	Tamper Proof, Panel Mount, S.S.													
Temperature Range														
5	Steam													
Heater Wattage														
5	Steam													
Controller Type														
5	Steam													
Thermistor Type														
5	Steam													
Voltage														
5	Steam													
D H R -									5	5	5	5	5	
Material	Port Config.	Seat Material	Cv Flow	Output Range	Cap Assembly	Seat Material	Cv Flow	Output Range	Cap Assembly	Temp Range	Heater Wattage	Controller Type	Thermistor Type	Voltage
Regulator A										Regulator B				

MV Miniature Vaporizing Regulator

1		SS 316L		Material of Body	
4		Monel			
A				Port Configuration (page 35) STANDARD BODY "A" (ONE INLET PORT AND ONE OUTLET PORT)	
0		1/8" FNPT (All Ports)		Port Type	
A		1/16" FNPT (All Ports)			
B		1/8" FNPT Inlets; 1/16" FNPT Outlets			
1		55° F - 85° F		Temperature Range	
2		75° F - 175° F			
3		130° F - 300° F			
4		260° F - 380° F			
1		40W		Heater Wattage	
2		40W with Thermal Cutout			
3		100W			
4		100W with Thermal Cutout			
B		12 VDC		Heater Voltage	
C		24 VDC			
3		0.06		Flow Coefficient (Cv)	
C		0.025 (Standard)			
C		0 - 10 Psig		Output Range	
D		0 - 25 Psig			
E		0 - 50 Psig			
G		0 - 100 Psig			
I		0 - 250 Psig			
J		0 - 500 Psig			
A		Tefzel		Seat Material	
B		CF Teflon			
C		Polyimide			
H		PCTFE (formerly Kel-F 81)			
Q		PEEK			
D		Viton (Standard)		Cavity O-Ring Material	
I		Teflon			
1		Tamper Proof, Standard, S.S.		Cap Style	
4		Tamper Proof, Panel Mount, S.S.			

M V -

Material	Port Config.	Port Type	Temp Range	Heater Wattage	Heater Voltage	Flow (Cv)	Output Range	Seat Material	O-Ring Material	Cap Style
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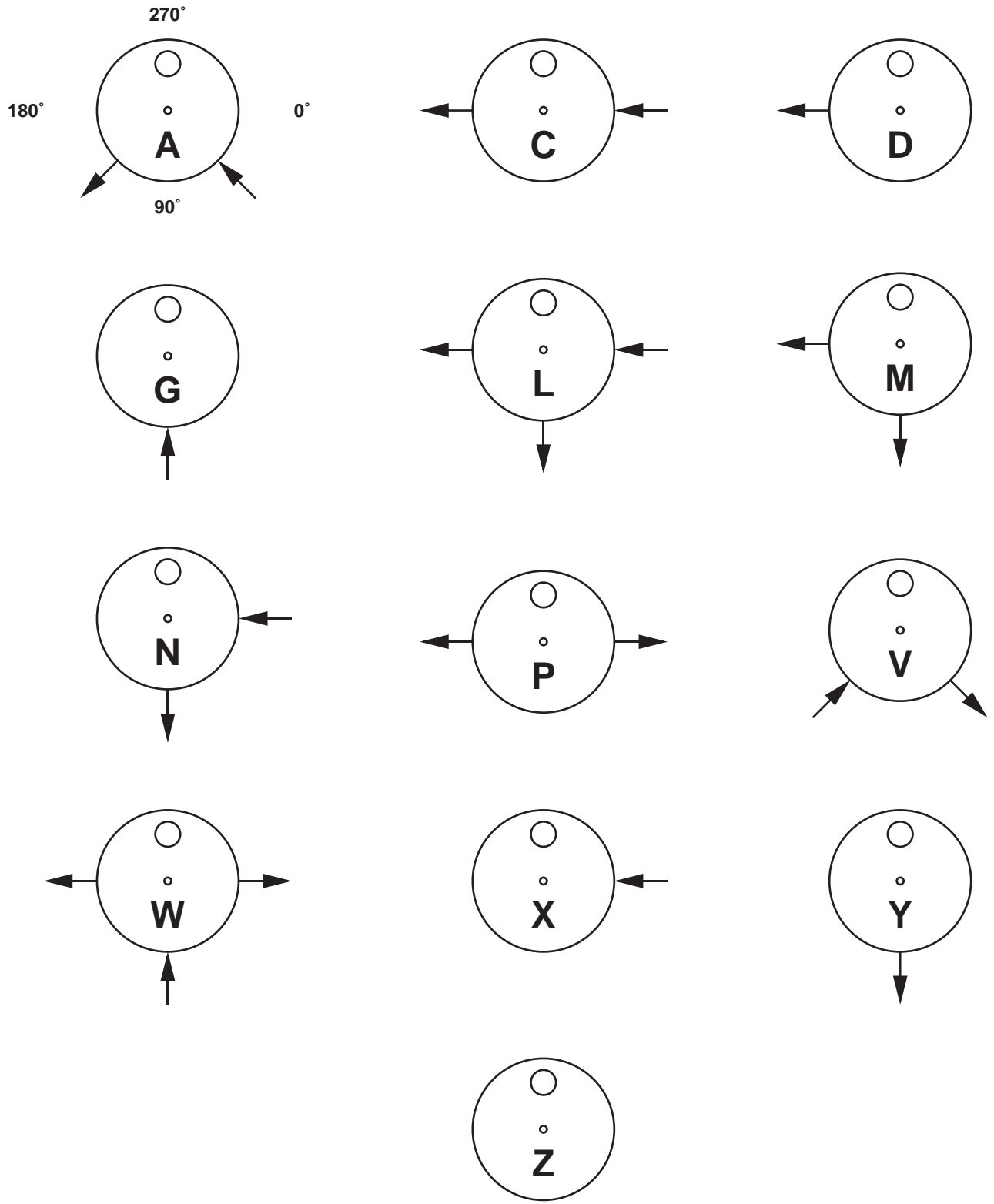
HXR Temperature Compensating Regulator

1		S.S. 316L, Standard		Material of Body	
1		1/4" FNPT		Optional porting types	
1		<25 Ra		Surface Finish of Diaphragm Cavity	
A		Tefzel		Seat Material	
B		CF Teflon			
C		Polyimide			
H		PCTFE (formerly Kel-F 81)			
Q		PEEK			
1		3/4" MNPT		Mounting Thread	
C		0 - 10 Psig		Outlet Range	
D		0 - 25 Psig			
E		0 - 50 Psig			
G		0 - 100 Psig			
I		0 - 250 Psig			
J		0 - 500 Psig			
1		Standard		Diaphragm Type	
6		Tefzel Ring / SS		Diaphragm Liner/Backing	
1		Standard, S.S.		Cap Assembly	
0		No Extension (3.75" Ins. Length)		Insertion Length	
1		Short Extension (8.05" Ins. Length)			
2		Long Extension (11.05" Ins. Length)			

H X R -

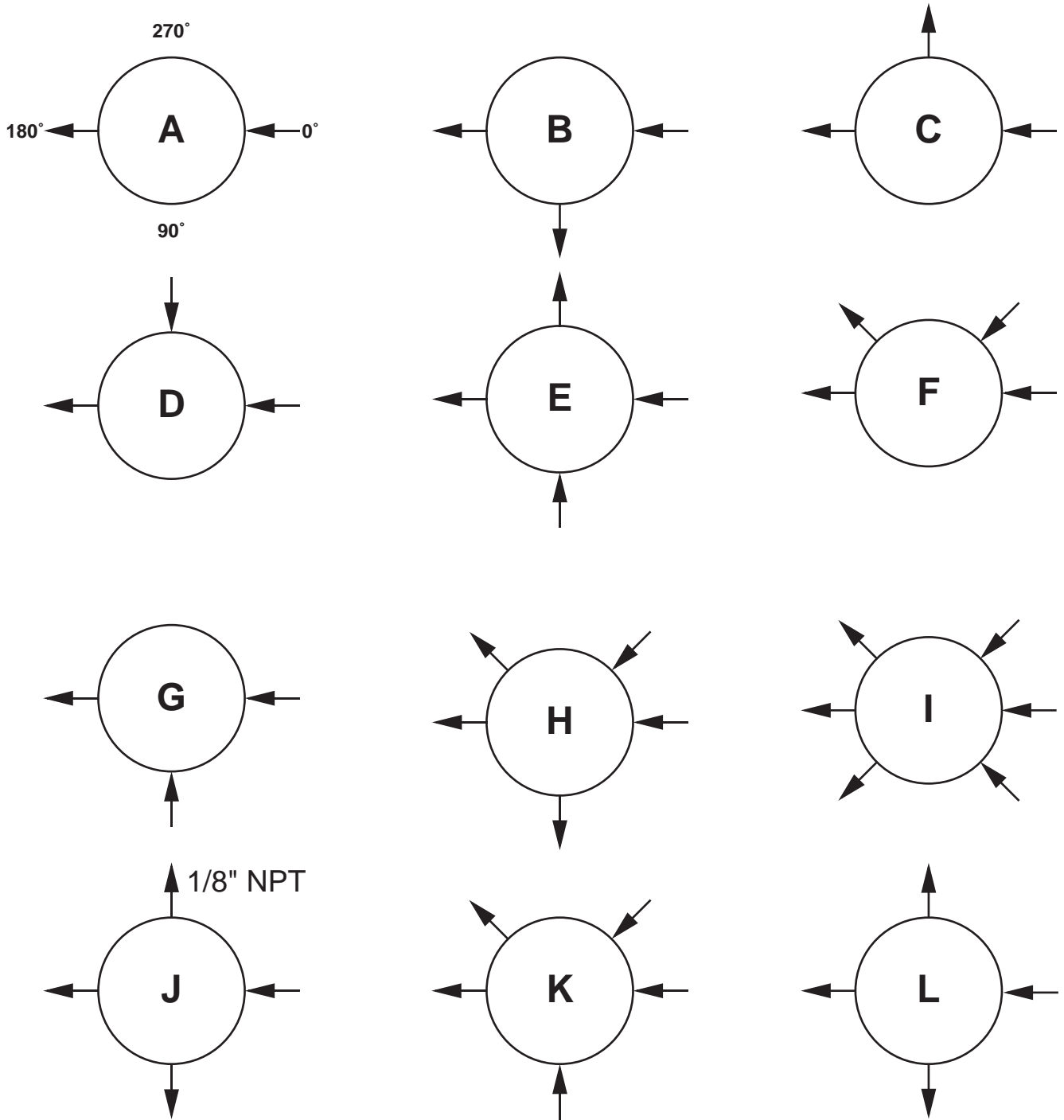
1	1	1				1	6	1	
Material	Port Style	Cavity Finish	Seat Material	Mounting Thread	Outlet Range	Diaphragm Type	Diaphragm Material	Cap Assembly	Insertion length

REGULATOR BODY PORTING CONFIGURATIONS FOR HPR-2 (STEAM & ELECTRIC) & HPR-2XW (STEAM & ELECTRIC)



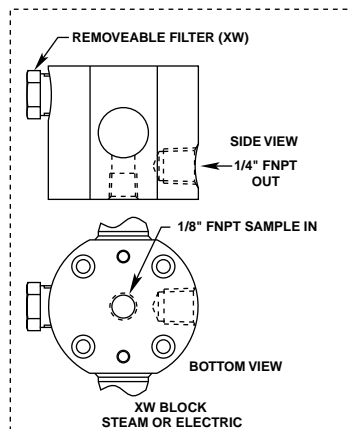
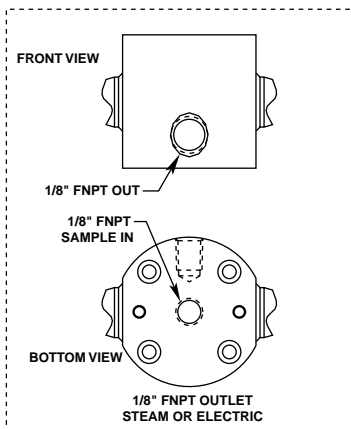
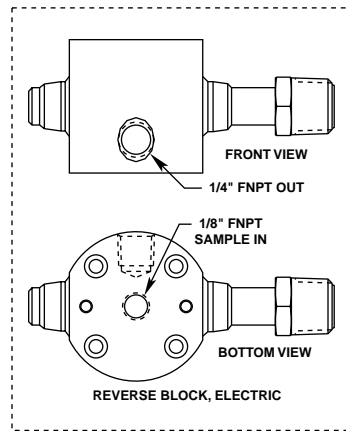
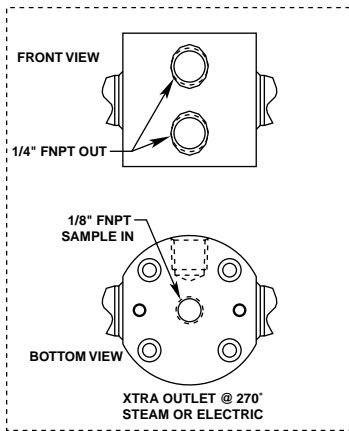
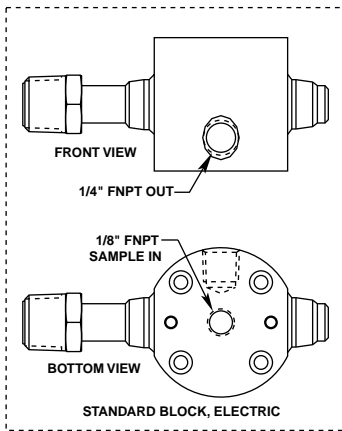
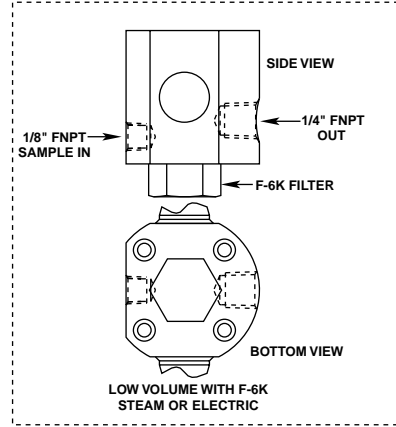
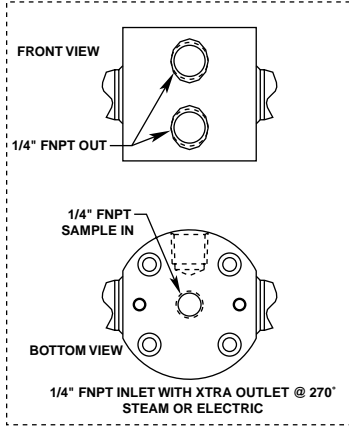
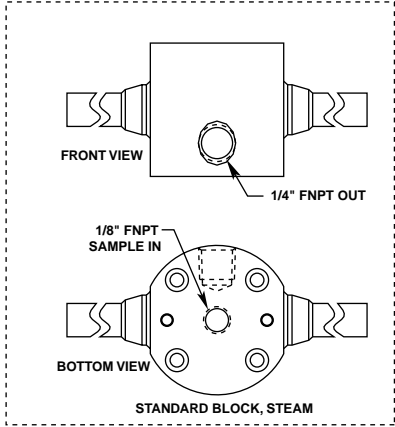
LOCATION OF PORTS FROM TOP VIEW
ARROW POINTING TOWARD BODY IS INLET
ARROW POINTING AWAY FROM BODY IS OUTLET

PORTING CONFIGURATIONS FOR MV-1

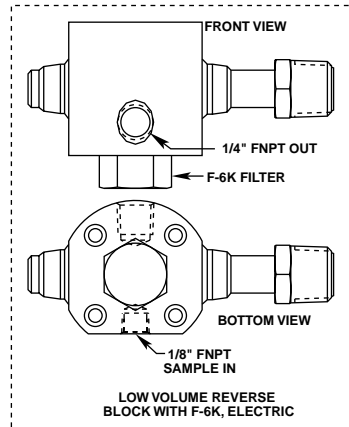
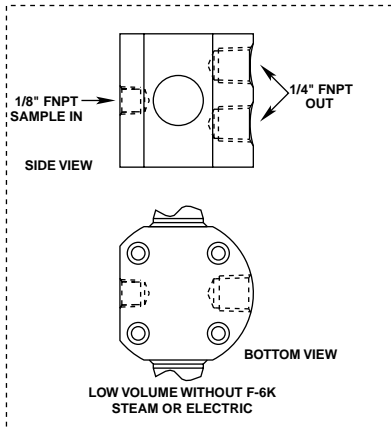
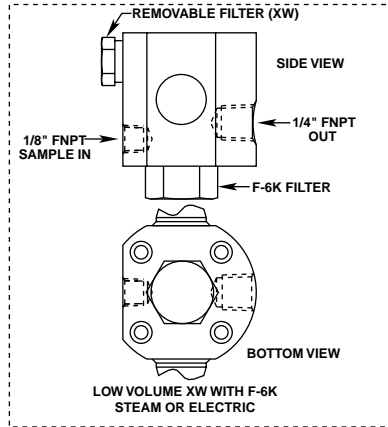
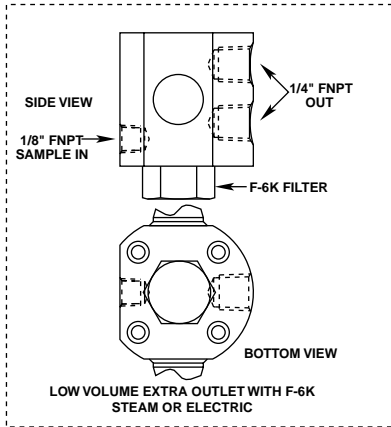


LOCATION OF PORTS FROM TOP VIEW
ARROW POINTING TOWARD BODY IS INLET
ARROW POINTING AWAY FROM BODY IS OUTLET

HEATER BLOCK CONFIGURATIONS FOR HPR-2 (STEAM & ELECTRIC) & HPR-2XW (STEAM & ELECTRIC)

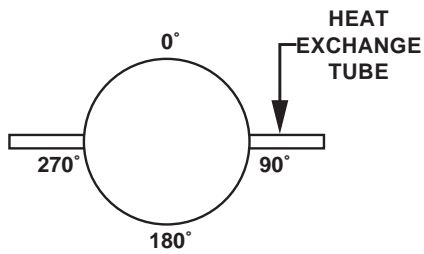


HEATER BLOCK CONFIGURATIONS FOR HPR-2 (STEAM & ELECTRIC) & HPR-2XW (STEAM & ELECTRIC) (CONTINUED)

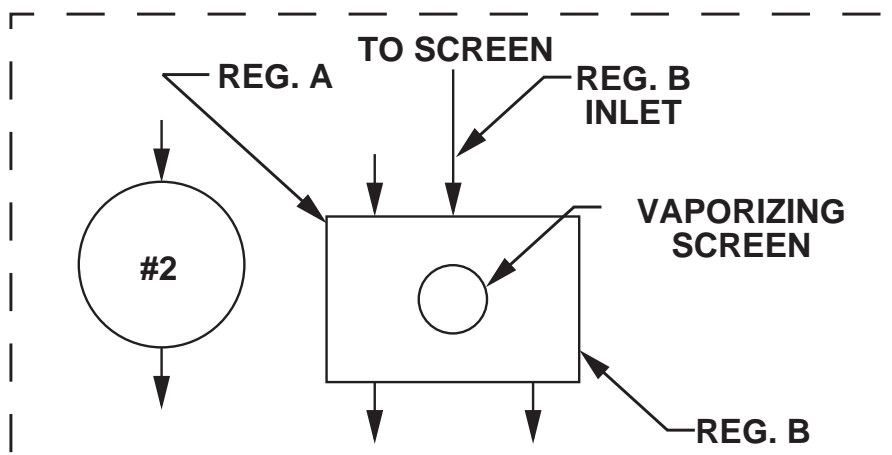
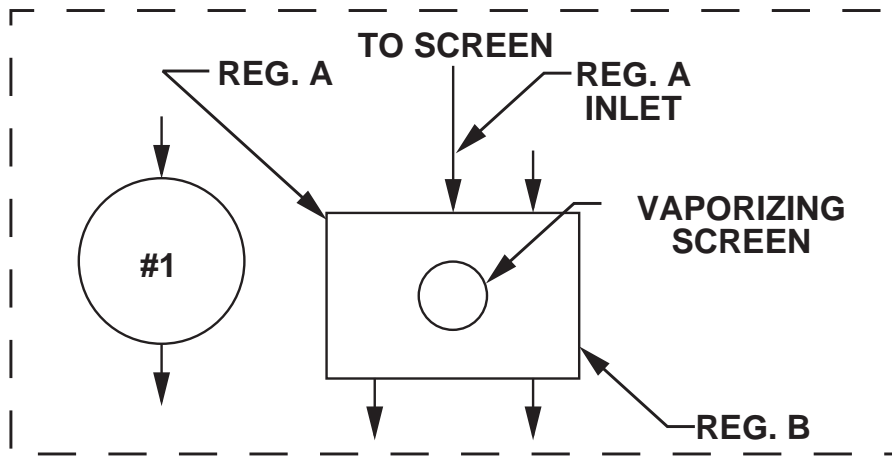
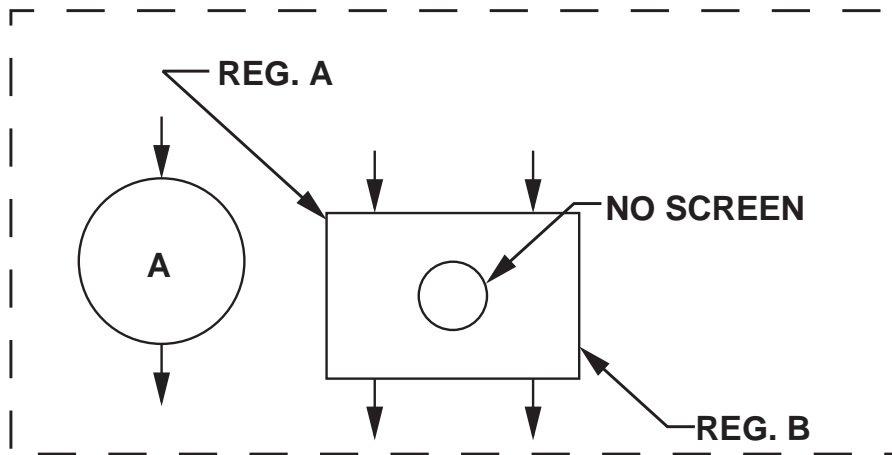
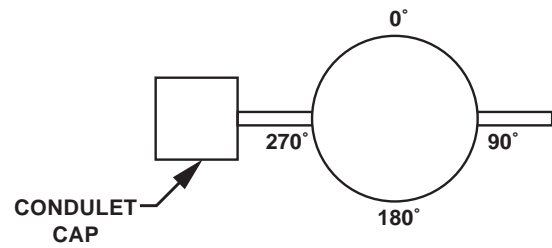


REGULATOR BODY PORTING CONFIGURATIONS FOR DHR (STEAM & ELECTRIC)

STEAM HEATED REGULATOR REFERENCE CLOCK



ELECTRICALLY HEATED REGULATOR REFERENCE CLOCK



LOCATION OF PORTS FROM TOP OF REGULATOR "A"
ARROW POINTING TOWARD BODY IS INLET
ARROW POINTING AWAY FROM BODY IS OUTLET