

HPR-2 Series

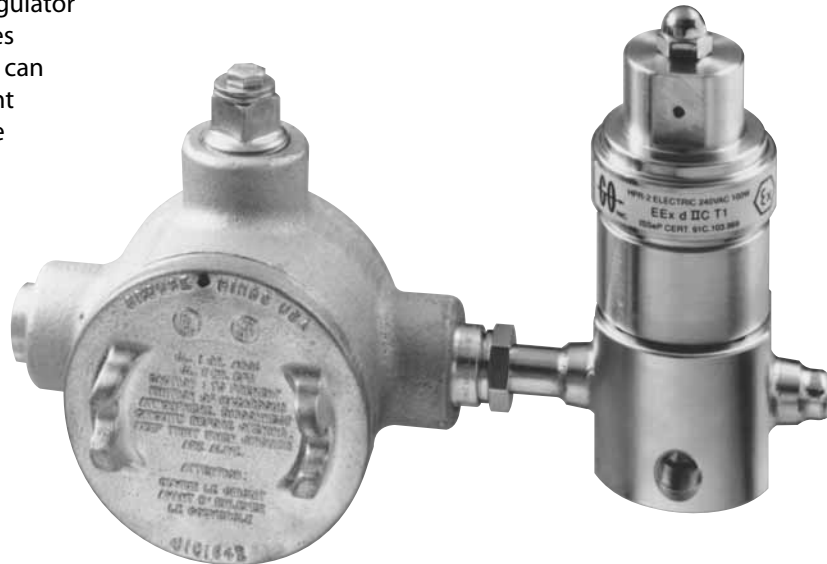
Electrically Heated Regulators



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 conduit assuring that there is always an adequate flame path between the environment and the controller. Safety considerations can be further enhanced by using the optional TCO (Thermal Cut Out) heater cartridge and proportional controller. These features enable the unit to boast a T3 rating with 150 watts of power.

Typical Applications

Analytical process sample conditioning systems:

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

Technical Data

CONSTRUCTION	316L stainless steel
OUTLET PRESSURES	0-10, 0-25, 0-50, 0-100, 0-250, and 0-500 psig
INLET PRESSURE	up to 6000 psig at 380° F (193° C)
HEATING CAPACITY RANGES (IN WATTS)	40, 50, 100, and 150
C _v COEFFICIENTS	0.06, 0.025, 0.2
CERTIFICATIONS	CSA certification # LR-82566-5 ATEX Directive 94/9/EC Certification # TRL03ATEX11001X

Features & Benefits

- Optional Hastelloy® C and Monel®
- Electropolished body with better than 25 Ra finish in diaphragm cavity for an optimal sealing surface
- Bubble-tight shutoff
- Modular pressure control and heat exchanger assemblies for easy maintenance
- Unique spiral wrapped heat exchange element provides up to 100 square inches of heat transfer area.
- Available in 120VAC or 240VAC
- Optional TCO heating cartridge and proportional controller

GO Regulator

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pressure regulators

HPR-2 Series

How to Order

Standard items in bold

H2 – 4 Z 3 3 H 3 G 4 1 4 7

BODY MATERIAL

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

PORT CONFIGURATION

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

TEMP. RANGE/HEATING TYPE

- 1** 55° F–85° F
- 2** 75° F–175° F
- 3** 130° F–300° F
- 4** 260° F–380° F

HEATER WATTAGE

- 1** 40W
- 2** 50W
- 3** 100W
- 4** 150W

SEAT MATERIAL

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

FLOW COEFFICIENT (Cv)

- 3** 0.06

OPTIONS

- 1** TCO thermistor
- 5** 6000 psig inlet w/TCO thermistor (1-pc assy.)
- 7** 6000 psig inlet w/standard thermistor (1-pc assy.)
- B** TCO thermistor w/PTFE/Inconel® diaphragm

CAP ASSEMBLY

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

HEATER BLOCK PORTING

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

HEATER BLOCK TYPE

- 3** 120 VAC
- 4** 240 VAC
- 5** No electronics
- 8** Proportional 120 VAC
- 9** Proportional 240 VAC

OUTLET RANGE

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

NOTE: The choices above represent an abbreviated list of the more commonly ordered options. For a complete listing of all available options, please see the Selection Wizard on the GO website at www.goreg.com or contact the factory.

Maximum Temperature & Operating Inlet Pressures

HPR-2 Electric 2-piece Assembly

(Heater block and regulator body separate)

SEAT MATERIAL	MAXIMUM PRESSURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High density PTFE	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
PCTFE (formerly Kel-F®)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
PEEK™	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)

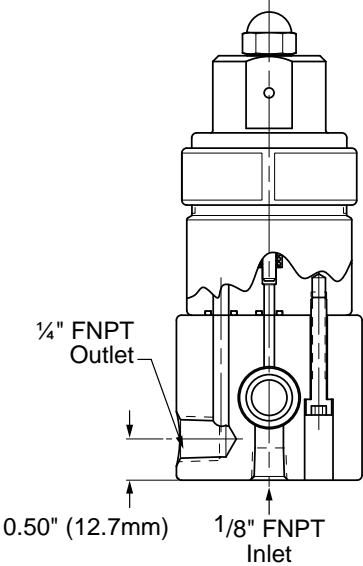
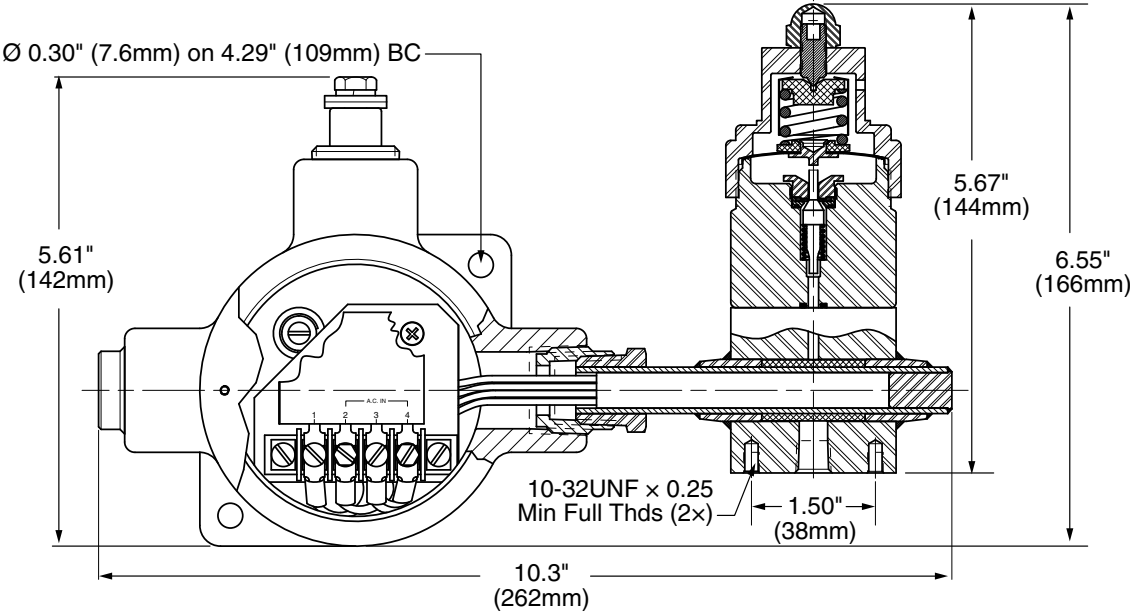
HPR-2 Electric 1-piece Assembly

(Integral heater block and regulator)

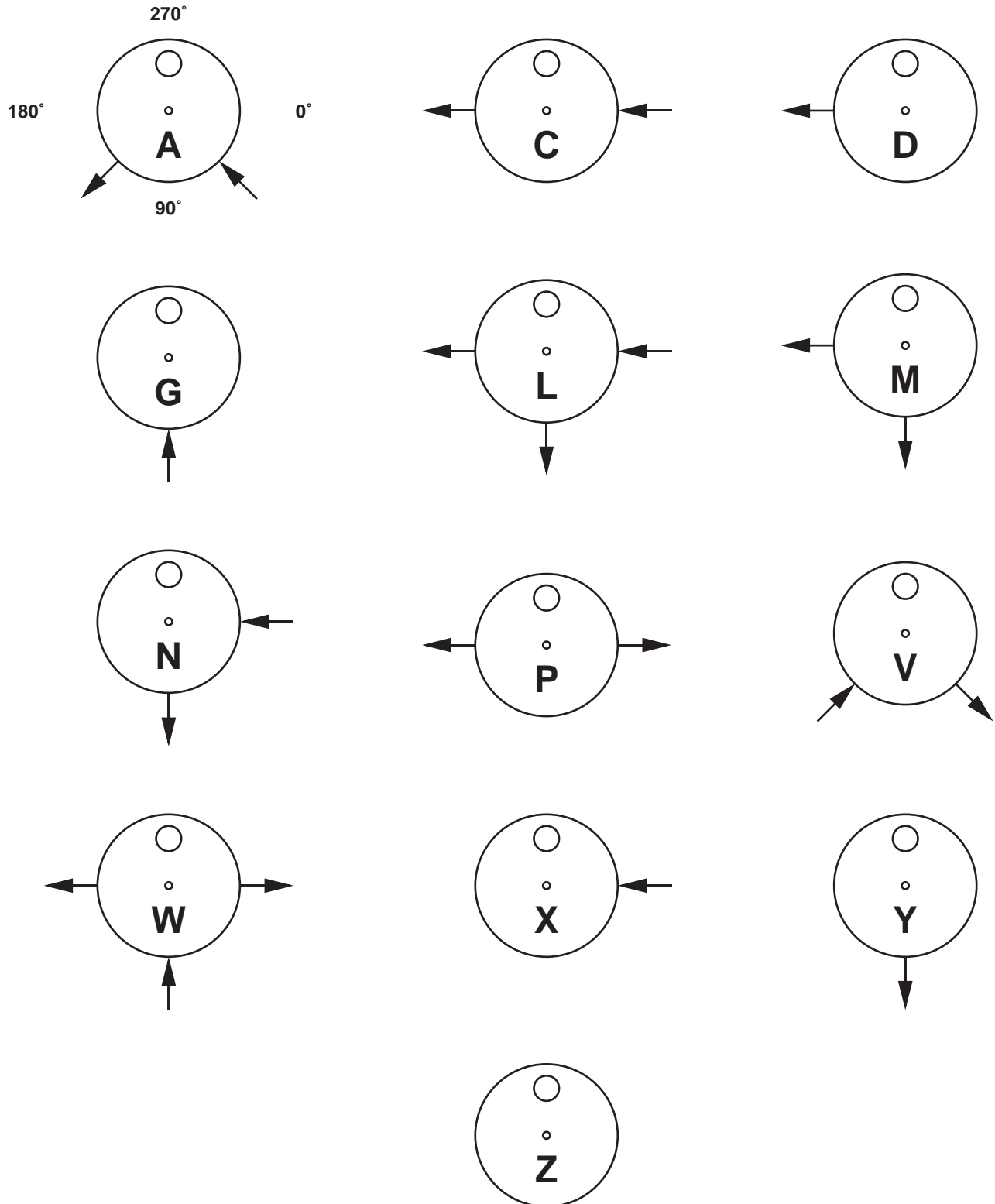
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PCTFE (formerly Kel-F®)	Up to 380° F (193° C)	@	3600 psig (24.82 MPa)
Polyimide	Up to 380° F (193° C)	@	6000 psig (24.82 MPa)
PEEK™	Up to 380° F (193° C)	@	6000 psig (24.82 MPa)

HPR-2 Series

Outline & Mounting Dimensions

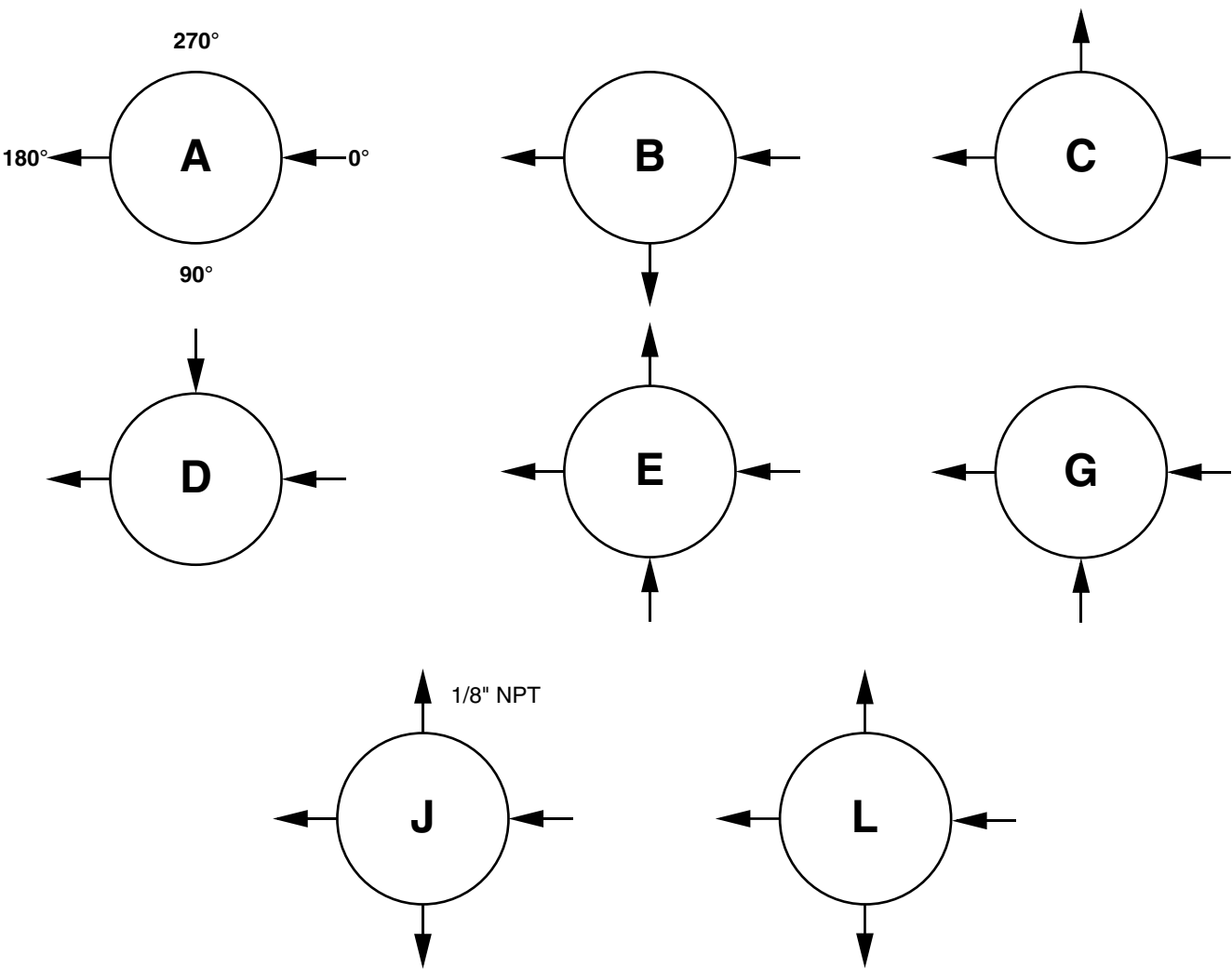


Porting Configurations (Pressure Regulator Body) for HPR-2 Steam & Electric and HPR-2XW Steam & Electric Series



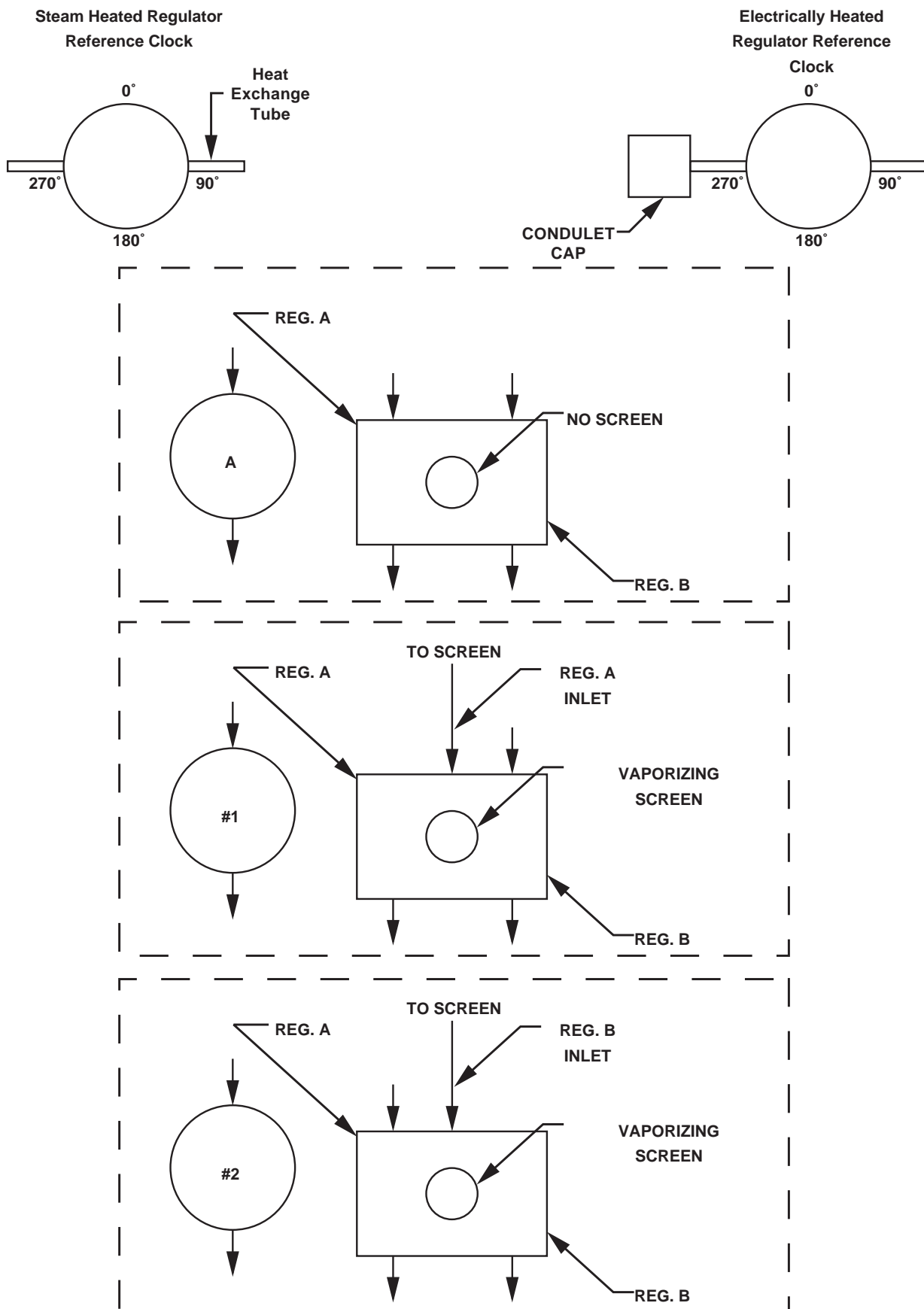
Location of ports from top view. Arrow pointing toward body is inlet. Arrow pointing away from body is outlet.

Porting Configurations for MV-1 Series



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

Porting Configurations for DHR Steam & Electric Series



Location of ports from to of regulator "A". Arrow pointing toward body is inlet. Arrow pointing away from body is outlet.

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

