GO REGULATOR

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, and 0–500 psig
INLET PRESSURE	up to 6000 psig at 380° F (193° C)
OPERATING TEMPERATURE	up to 550° F (285° C)
C_V COEFFICIENTS	0.06, 0.025, 0.2
INLET CONNECTIONS	⅛″ FNPT
OUTLET CONNECTIONS	¼″ FNPT

Features & Benefits

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

pressure regulators

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HPR-2 Series

How to Order

Standard items in bold

H2 – 1 Z 5 5 Q 3 C 1 1 1 4

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

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

For more configurations, see page 32

TEMPERATURE RANGE / HEATING TYPE
- **5 Steam**

HEATER WATTAGE
- **5 Steam**

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

FLOW COEFFICIENT (Cv)
- **3 0.06**

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

HEATER BLOCK TYPE
- **1 Steam**

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

For more blocks, see pages 34–35

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

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

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

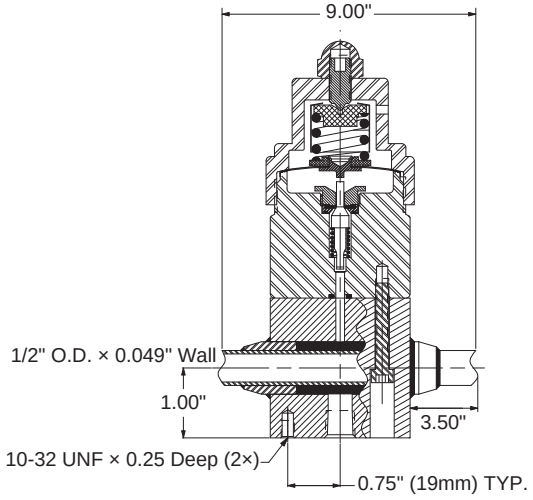
HPR-2 Steam 2-piece Assembly
(Heater block and regulator body separate)

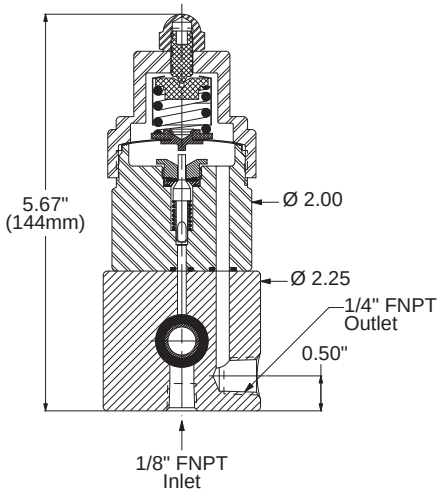
SEAT MATERIAL	MAXIMUM PRESSURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	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-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 Steam 1-piece Assembly
(Integral heater block and regulator)

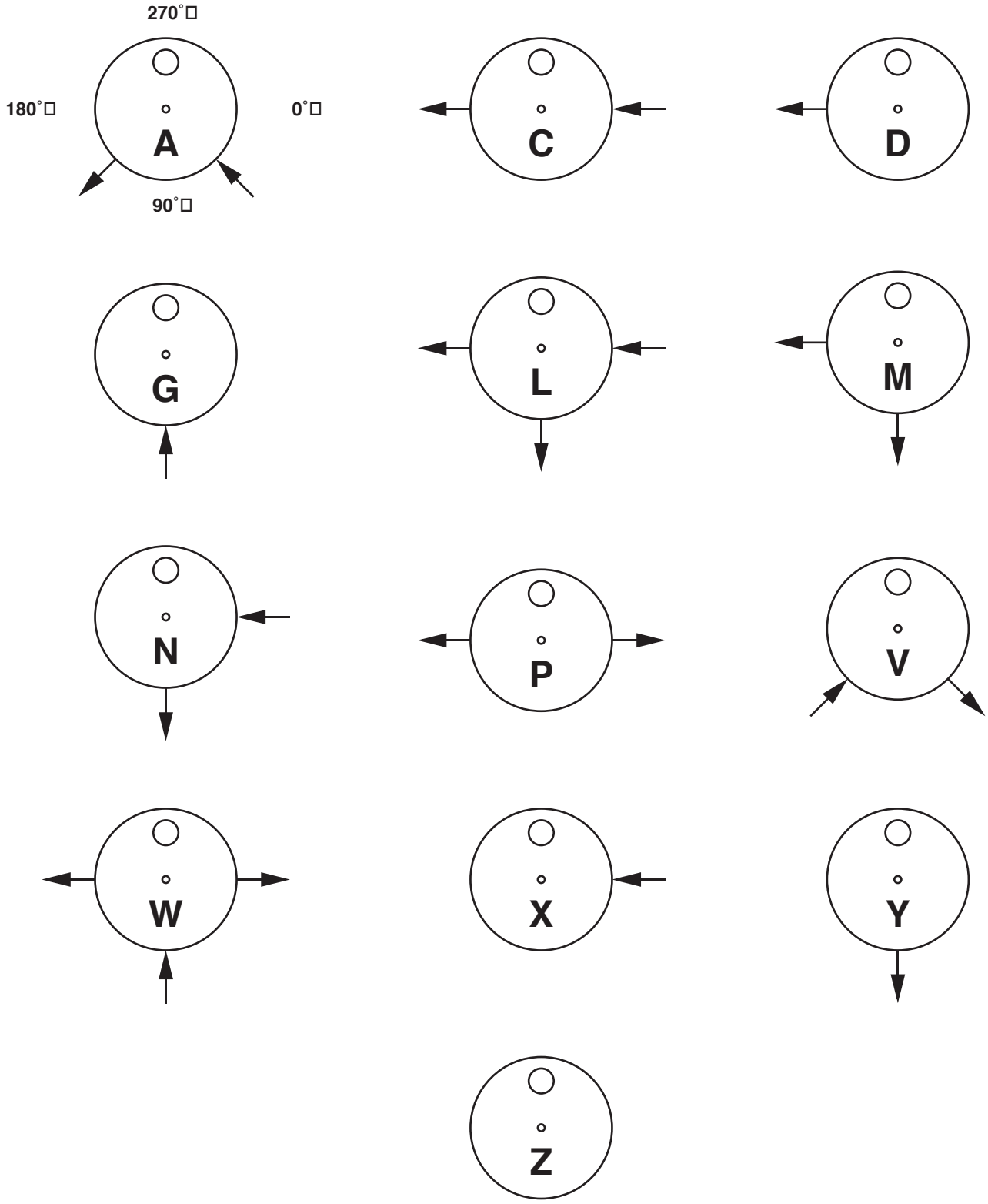
SEAT MATERIAL	MAXIMUM PRESSURE	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F (80° C to 148° C)	@	1000 psig (6.90 MPa)
	301° F to 380° F (148° C to 193° C)	@	400 psig (2.76 MPa)
High density Teflon®	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)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

Outline & Mounting Dimensions



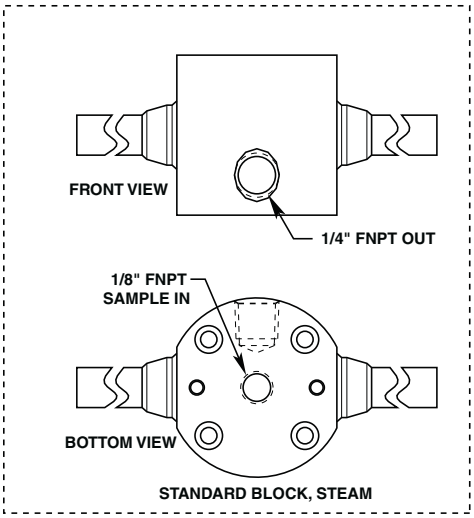


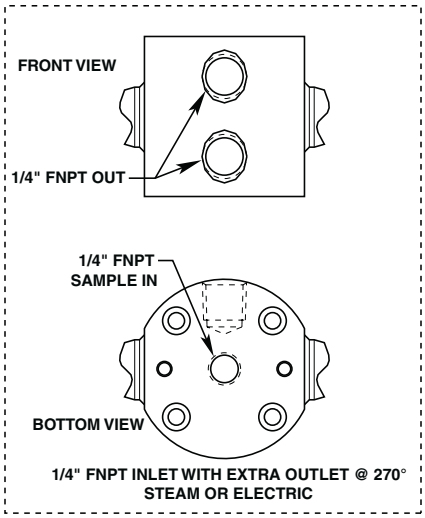
Porting Configurations (Pressure Regulator Body) for HPR-2 Steam & Electric and HPR-2XW Steam & Electric Series

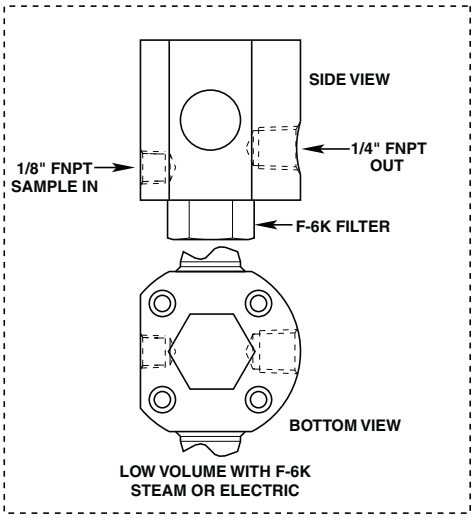


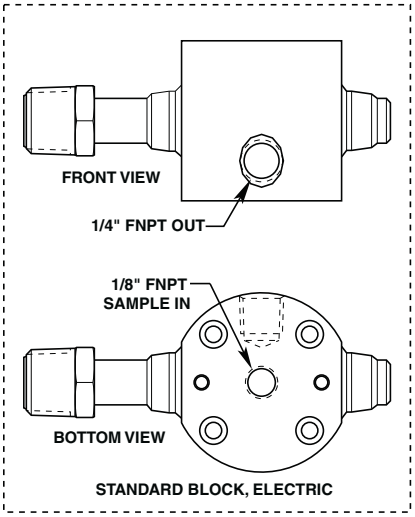
Location of ports from top view. Arrow pointing toward body is inlet. Arrow pointing away from body is outlet.

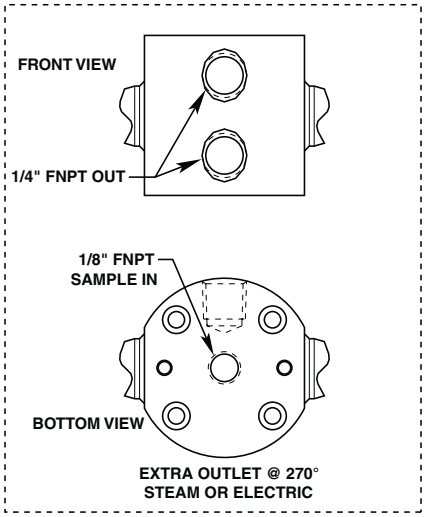
Heater Block Configurations
for HPR-2 Steam & Electric and HPR-2XW Steam & Electric Series

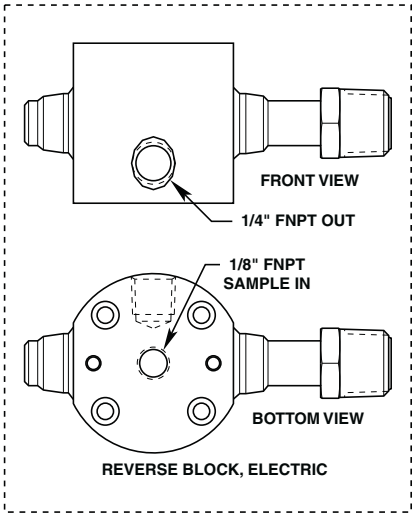


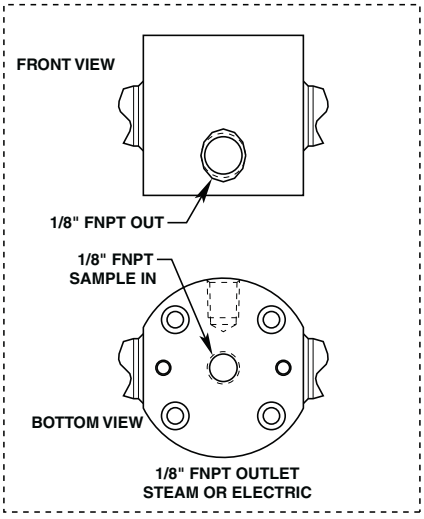


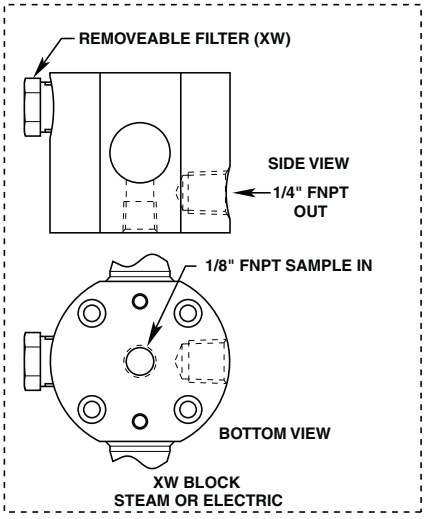


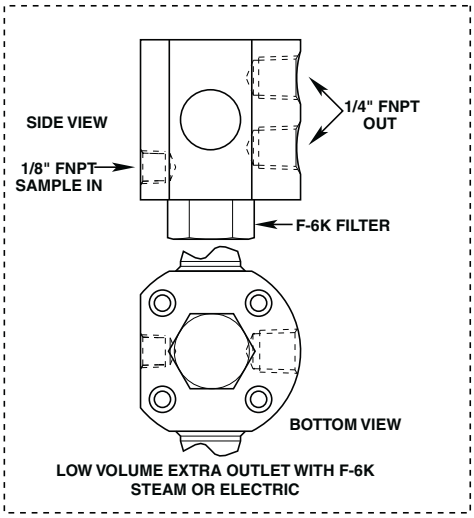




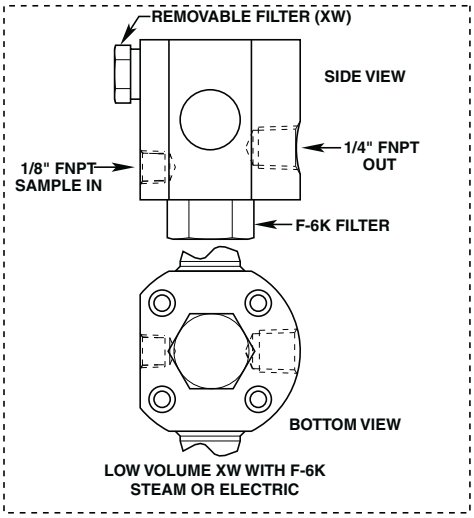




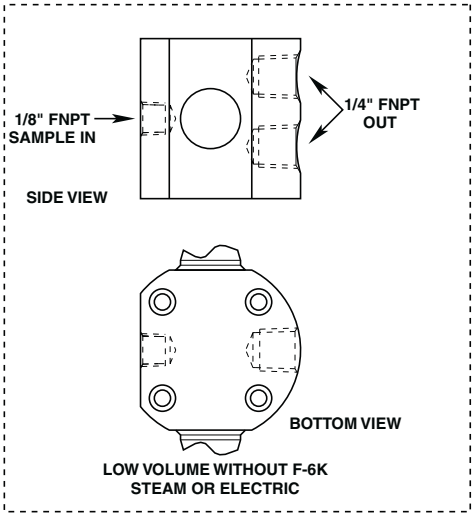




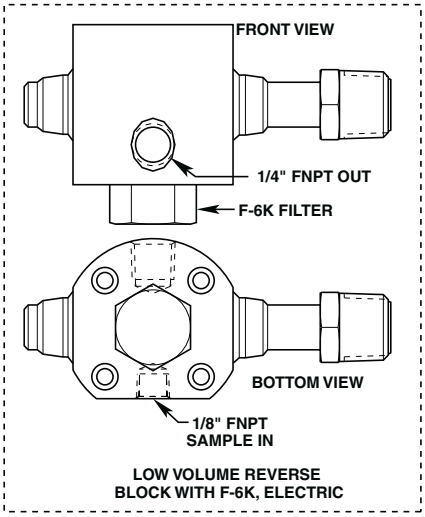
LOW VOLUME EXTRA OUTLET WITH F-6K
STEAM OR ELECTRIC



LOW VOLUME XW WITH F-6K
STEAM OR ELECTRIC



LOW VOLUME WITHOUT F-6K
STEAM OR ELECTRIC



LOW VOLUME REVERSE
BLOCK WITH F-6K, ELECTRIC