

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, and 0–500 psig
INLET PRESSURE	up to 6000 psig at 380° F (193° C)
OPERATINGTEMPERATURE	up to 550° F (285° C)
C _V COEFFICIENTS	0.06, 0.025, 0.2
INLET CONNECTIONS	‰″ FNPT
OUTLET CONNECTIONS	1⁄4″ FNPT

GO Regulator

405 Centura Court • PO Box 4866 (29305) • Spartanburg, SC 29303 Phone (864) 574-7966 Fax (864) 574-5608 www.goreg.com • sales@goreg.com

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.



HPR-2XW Series

How to Order Standard items in bold H2 – <u>1</u> <u>Z</u> <u>5</u> <u>5</u> <u>Q</u> <u>3</u> <u>L</u> <u>2</u> <u>Z</u> <u>1</u> <u>4</u> **OPTIONS BODY MATERIAL** 6000 psig inlet steam heated (1-pc assy.) 316L stainless steel 1 4 4 Monel® **CAP ASSEMBLY** PORT CONFIGURATIONS Tamper-proof, standard, stainless 1 Z Standard steel For more configurations, see page 32 HEATER BLOCK PORTING TEMPERATURE RANGE / HEATING TYPE-Standard block 1 5 Steam 2 Extra outlet block For more blocks, see pages 34–35 HEATER WATTAGE 5 Steam HEATER BLOCK TYPE 2 Steam, HPR-2XW SEAT MATERIAL A Tefzel[®] **OUTPUT RANGE B** CF PTFE C 0-10 psig С Polyimide D 0-25 psig H PCTFE (formerly Kel-F[®] 81) 0-50 psig Е Q PEEK[™] 0-100 psig G 0-250 psig Т FLOW COEFFICIENT (Cv) 0-500 psig J 3 0.06 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-2XW 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	@	1000 psig (6.90 MPa)
	(80° C to 148° C)		1 5
	301° F to 380° F	0	400 psig (2.76 MPa)
	(148° C to 193° C)	ιų.	
High density PTFE	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F	0	1000 main (C 00 MBa)
	(80° C to 148° C)	(a)	1000 psig (6.90 MPa)
	301° F to 380° F	0	400 psig (2.76 MPa)
	(148° C to 193° C)	w	
PCTFE		~	
(formerly Kel-F®)	Up to 380° F (193° C)	(a)	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)
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HPR-2XW 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	0	1000 psig (6.90 MPa)
	(80° C to 148° C)	w	
	301° F to 380° F	0	400 psig (2.76 MPa)
	(148° C to 193° C)	w	
High density PTFE	Up to 175° F (80° C)	@	3600 psig (24.82 MPa)
	176° F to 300° F	0	$1000 \text{ pcig} (6.90 \text{ MP}_{2})$
	(80° C to 148° C)	(Le)	1000 psig (0.50 MF a)
	301° F to 380° F	0	400 psig (2.76 MPa)
	(148° C to 193° C)	e.	
PCTFE	Lip to 380° F (193° C)	0	3600 psig (24.82 MPa)
(formerly Kel-F®)	op to 500 T (155 C)	e	5000 p3ig (24.02 Mil a)
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-2XW Series

Outline & Mounting Dimensions

