GO_{REGULATOR}

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

<u> Technical Data – Steam Heated</u>

| 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 | ¼″ 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 240VAC and steam-heated
- Optional TCO heating cartridge and proportional controller

Technical Data – Electrically Heated

| I d d i i i i d d d d | |
|---------------------------------------|---|
| 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 |

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 DOIS WOOL As and Liquid Control Technologie

Pressure & Vacuum

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ube & Fitting HVACR

Custom Services

LNG Series

How to Order Standard items in bold 10283 <u>C 2 3</u> <u>3</u> 12 **BASIC PART NUMBER** THERMISTOR TYPE **102830** 0–10 psig electronically heated 1 Thermally protected (TCO) 102831 0-25 psig electroncially heated 2 Non-thermally protected 102832 0–50 psig electronically heated 5 Steam 102833 0-100 psig electronically heated **CONTROLLER TYPE** 102834 0-250 psig electronically heated On/Off 1 **102835** 0–500 psig electroncially heated Proportional 2 **109551** 0–25 psig steam heated 5 Steam **109552** 0–50 psig steam heated CONFIGURATION **109553** 0–100 psig steam heated Standard enclosure (painted steel) 109554 0-250 psig steam heated 1 **109555** 0–500 psig steam heated 2 Stainless steel enclosure Standard enclosure, all 1/4" tube 3 SEAT MATERIAL Stainless steel enclosure, all 1/4" tube 4 Tefzel® А Standard enclosure, ¼" tube bulkhead 5 R CF PTFE 6 Stainless steel enclosure, ¼" tube bulkhead С Polyimide HEATER BLOCK TYPE PEEK™ Q Steam 1 WATTAGE-2 Steam, HPR-2XW 1 40 watts 3 120 VAC 2 50 watts 4 240 VAC 3 100 watts 6 120 VAC, HPR-2XW 150 watts 4 7 240 VAC, HPR-2XW 5 Steam heated **TEMPERATURE RANGE** 55° F to 85° F 1 2 75° F to 175° F NOTE: The choices above represent an abbreviated list of the more commonly 130° F to 300° F 3 ordered options. For a complete listing of all available options, please 4 260° F to 380° F see the Selection Wizard on the GO website at www.goreg.com or 5 Steam heated contact the factory.

Maximum Temperature & Operating Inlet Pressures

HPR-2 Electric or Steam 2-piece Assembly

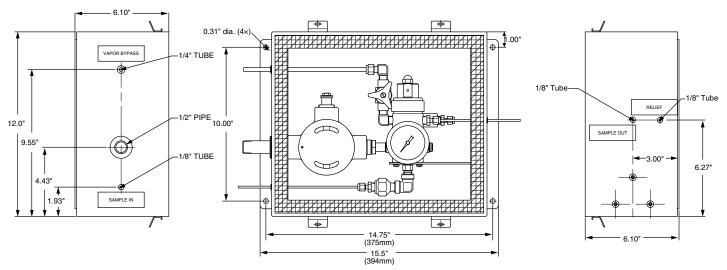
HPR-2 Electric or Steam 1-piece Assembly

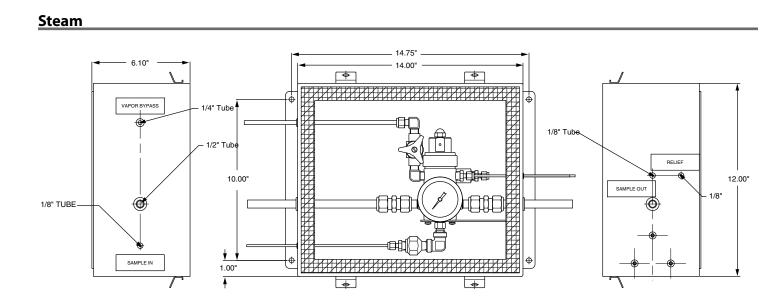
(Heater block and regulator body separate) (Integral heater block and regulator) MAXIMUM OPERATING INLET MAXIMUM OPERATING INLET SEAT MATERIAL SEAT MATERIAL MAXIMUM PRESSURE @ MAXIMUM PRESSURE @ PRESSURE PRESSURE Up to 175° F (80° C) @ Up to 175° F (80° C) @ 3600 psig (24.82 MPa) 3600 psig (24.82 MPa) 176° F to 300° F 176° F to 300° F @ 1000 psig (6.90 MPa) @ 1000 psig (6.90 MPa) **Tefzel**[®] (80° C to 148° C) Tefzel® (80° C to 148° C) 301° F to 380° F 301° F to 380° F 400 psig (2.76 MPa) 400 psig (2.76 MPa) @ @ (148° C to 193° C) (148° C to 193° C) Up to 175° F (80° C) @ 3600 psig (24.82 MPa) Up to 175° F (80° C) 3600 psig (24.82 MPa) @ 176° F to 300° F 176° F to 300° F 1000 psig (6.90 MPa) 1000 psig (6.90 MPa) @ @ High density PTFE High density PTFE (80° C to 148° C) (80° C to 148° C) 301° F to 380° F 301° F to 380° F 400 psig (2.76 MPa) 400 psig (2.76 MPa) @ @ (148° C to 193° C) (148° C to 193° C) PCTFE (formerly Kel-F®) PCTFE (formerly Kel-F®) Up to 380° F (193° C) @ 3600 psig (24.82 MPa) 3600 psig (24.82 MPa) Up to 380° F (193° C) @ Polyimide Up to 380° F (193° C) @ 3600 psig (24.82 MPa) Polyimide Up to 380° F (193° C) @ 6000 psig (24.82 MPa) PEEK™ PEEK™ Up to 380° F (193° C) @ 3600 psig (24.82 MPa) Up to 380° F (193° C) @ 6000 psig (24.82 MPa)

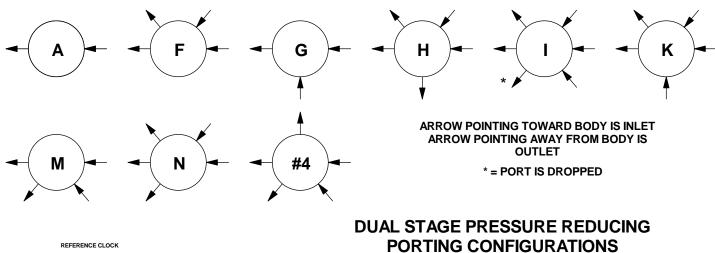
LNG Series

Outline & Mounting Dimensions

Electrical







REFERENCE CLOCK 270° 180° 0 90° LOCATION OF PORTS VIEWING FROM TOP OF FIRST STAGE

