GO REGULATOR

UPR-1 Series

Precision Pressure Regulators



The UPR-1 Series is the high purity version of the GO Regulator PR-1 whose design and performance reliability has been proven in over 30 years of field use. The UPR-1 design features include internal components with standard surface finishes better than 25 Ra. This feature provides the semiconductor end-user with a precision pressure regulator, economically priced for applications ranging from gas distribution to point of use in the manufacturing tool.

Features & Specifications

- 25 Ra internal surface finish, standard
- Cv flow: 0.025, 0.06, 0.2, and 0.5
- 316L stainless steel body, cap, internals
- Male, female or internally machined VCR®-compatible ports
- 1×10^{-9} atm. cc/sec, inboard leak spec

Applications

- Bulk inert gas distribution
- Diffusion furnaces
- Epitaxial reactors
- Specialty gas distribution
- Manufacturing tool

Options

- Wetted materials for corrosive service Hastelloy®

pressure regulators

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UPR-1 Series

How to Order

UPR1 –

BODY MATERIAL
¼″ VCR® only, see 'Outline & Mounting Dimensions' for other end-to-end dimensions
- **1** 316L stainless steel, 3.70 end-to-end
- **2** Hastelloy® C, 3.70 end-to-end
- **3** 316L stainless steel, 4.12 end-to-end

PORT CONFIGURATIONS
- **A** Standard

For more port configurations, see page 7.

PROCESS & GAUGE PORTS
- **1** ¼″ FVCR process ports, ¼″ FVCR gauge ports
- **2** ¼″ FVCR process ports, ¼″ swivel MVCR gauge ports
- **3** ¼″ FVCR process ports, ¼″ IVCR gauge ports
- **4** ¼″ swivel MVCR process ports, ¼″ FVCR gauge ports
- **5** ¼″ swivel MVCR process ports, ¼″ swivel MVCR gauge ports
- **9** ¼″ IVCR process ports, ¼″ IVCR gauge ports
- **A** ⅜″ FVCR process ports, ¼″ FVCR gauge ports
- **B** ⅜″ FVCR process ports, ¼″ swivel MVCR gauge ports
- **C** ⅜″ FVCR process ports, ¼″ IVCR gauge ports
- **D** ⅜″ swivel MVCR process ports, ¼″ FVCR gauge ports
- **E** ⅜″ swivel MVCR process ports, ¼″ swivel MVCR gauge ports
- **F** ⅜″ swivel MVCR process ports, ¼″ IVCR gauge ports
- **G** ½″ FVCR process ports, ¼″ FVCR gauge ports
- **H** ½″ FVCR process ports, ¼″ swivel MVCR gauge ports
- **I** ½″ FVCR process ports, ¼″ IVCR gauge ports
- **J** ½″ swivel MVCR process ports, ¼″ FVCR gauge ports

CAP ASSEMBLY
- **1** Standard, stainless steel
- **4** Panel mount, stainless steel
- **7** Captured vent, stainless steel

DIAPHRAGM MATERIAL
- **1** Teflon®/stainless steel
- **6** Tefzel ring/stainless steel
- **0** Teflon®/Hastelloy® C

DIAPHRAGM TYPE
- **1** Facing/metal backing
- **4** Vacuum-assist spring

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
- **W** 0–750 psig

FLOW COEFFICIENT (Cv)
- **3** 0.06
- **5** 0.2
- **C** 0.025

SEAT MATERIAL
- **A** Tefzel®
- **H** PCTFE (formerly Kel-F® 81)
- **Q** PEEK™

SURFACE FINISH OF DIAPHRAGM CAVITY
- **1** < 25 Ra

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.

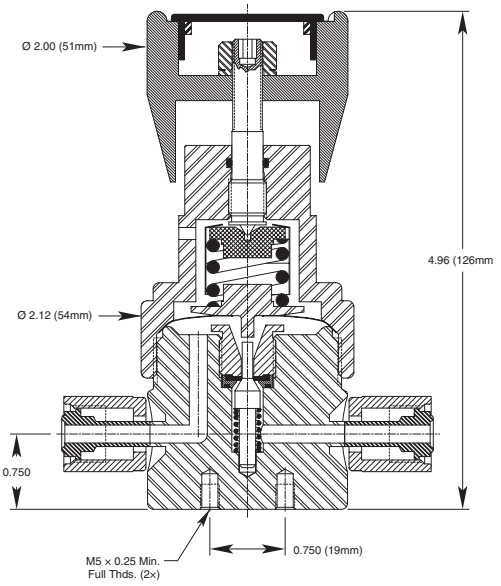
Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE*	@	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	150° F (66° C)	@	3600 psig (24.82 MPa)
High density Teflon®	150° F (66° C)	@	3600 psig (24.82 MPa)
PCTFE (formerly Kel-F® 81)	175° F (80° C)	@	6000 psig (41.37 MPa)
Polyimide	500° F (260° C)	@	3600 psig (24.82 MPa)
Polyimide	175° F (80° C)	@	6000 psig (41.37 MPa)
PEEK™	500° F (260° C)	@	3600 psig (24.82 MPa)
PEEK™	175° F (80° C)	@	6000 psig (41.37 MPa)

* *Temperatures in excess of 175° F (80° C) require the use of a metal knob or the tamper-proof option.*

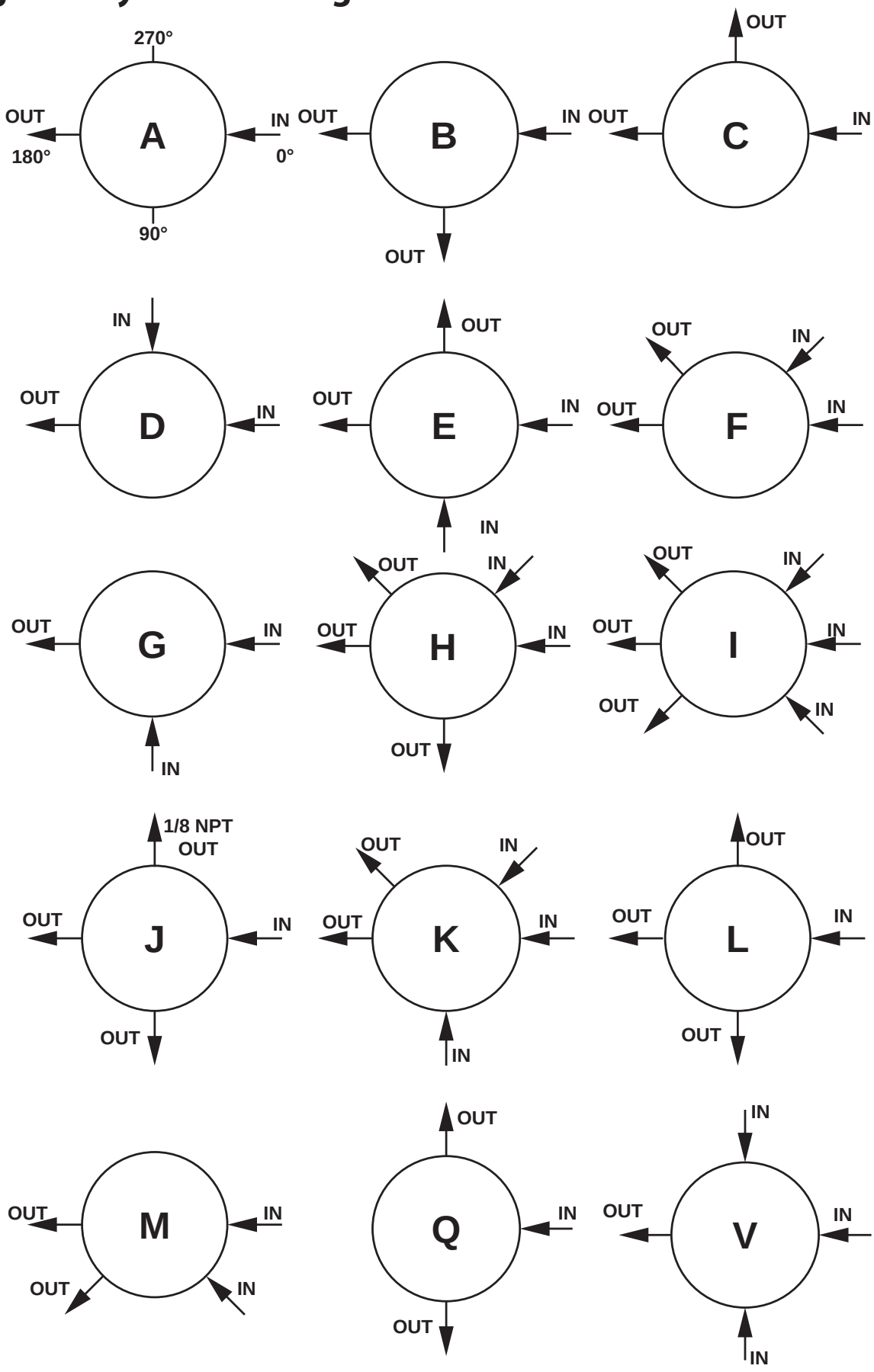
Outline & Mounting Dimensions

Panel mount option requires 1.300 (35.3mm) minimum diameter panel cut out



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Hastelloy® is a registered trademark of Haynes International, Inc.
Teflon® and Tefzel® are registered trademarks of the DuPont Company.
Kel-F® is a registered trademark of 3M Company.
PEEK™ is a trademark of Victrex PLC.

Porting Configurations for High Purity Pressure Regulators



LOCATION OF PORTS FROM TOP VIEW