GO REGULATOR

UPR-7 Series

High Flow Precision Pressure Regulator



The high flow coefficient of the UPR-7 provides the user with a high purity pressure regulator exhibiting very low droop characteristics. The combination of high flow and low droop makes the UPR-7 ideally suited for bulk gas distribution applications. The UPR-7 Series features fully electropolished 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
- High flow, Cv 1.1
- Low droop characteristics
- 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

Options

- Wetted materials for corrosive service: Hastelloy®, Monel®

pressure regulators

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

UPR-7 Series

How to Order

UPR7 –

BODY MATERIAL
- **1** 316L stainless steel
- **2** Hastelloy® C

PORT CONFIGURATIONS
- **A** Standard

For more port configurations, see page 7.

PROCESS & GAUGE PORTS
- **3** ¼″ FVCR process ports, ¼″ IVCR gauge ports
- **4** ¼″ swivel MVCR process ports, ¼″ FVCR gauge ports
- **7** ¼″ IVCR process ports, ¼″ FVCR gauge ports
- **A** ⅜″ FVCR process ports, ¼″ FVCR gauge ports
- **D** ⅜″ swivel MVCR process ports, ¼″ FVCR gauge ports
- **G** ½″ FVCR process ports, ¼″ FVCR gauge ports
- **I** ½″ FVCR process ports, ¼″ IVCR gauge ports
- **J** ½″ swivel MVCR process ports, ¼″ FVCR gauge ports
- **M** ¾″ FVCR process ports, ¼″ FVCR gauge ports
- **N** ¾″ swivel MVCR process ports, ¼″ swivel MVCR gauge ports

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

SEAT MATERIAL
- **A** Tefzel®
- **D** Viton® (300 psig max. inlet)
- **H** PCTFE (formerly Kel-F® 81)
- **I** Teflon®
- **K** Kalrez® (300 psig max. inlet)
- **Q** PEEK™

CAP ASSEMBLY
- **1** Standard, stainless steel
- **2** T-handle, stainless steel
- **7** Captured vent, stainless steel
- **8** Tamper-proof, stainless steel

DIAPHRAGM FACING/BACKING
- **1** Teflon®/stainless steel
- **2** Teflon®/Viton®
- **6** Tefzel® ring/stainless steel
- **0** Teflon®/Hastelloy® C

DIAPHRAGM TYPE
- **1** Standard

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

FLOW COEFFICIENT (Cv)
- **5** 0.2
- **8** 1.1
- **H** 0.5

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

Up to 100 psig Outlet Pressure

SEAT MATERIAL	MAXIMUM TEMPERATURE*	@	MAXIMUM OPERATING INLET PRESSURE
Teflon®	150° F (66° C)	@	1000 psig (6.90 MPa)
Tefzel®	175° F (80° C)	@	3600 psig (24.82 MPa)
PCTFE (formerly Kel-F® 81)	175° F (80° C)	@	3600 psig (24.82 MPa)
PEEK™	250° F (121° C)	@	3600 psig (24.82 MPa)
Viton®	250° F (121° C)	@	300 psig (2.07 MPa)
Kalrez®	250° F (121° C)	@	300 psig (2.07 MPa)

0–250 psig Outlet Pressure (Hard Knob)

SEAT MATERIAL	MAXIMUM TEMPERATURE*	@	MAXIMUM OPERATING INLET PRESSURE
Teflon®	150° F (66° C)	@	500 psig (3.45 MPa)
Tefzel®	175° F (80° C)	@	500 psig (3.45 MPa)
PCTFE (formerly Kel-F® 81)	175° F (80° C)	@	500 psig (3.45 MPa)
Viton®	250° F (121° C)	@	300 psig (2.07 MPa)
Kalrez®	250° F (121° C)	@	300 psig (2.07 MPa)

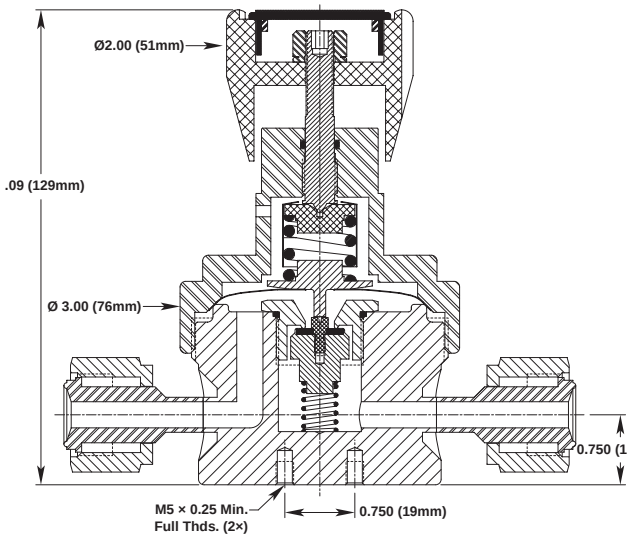
0–250 psig & 0–500 psig Outlet Pressures (T-handle or Tamper-proof)

SEAT MATERIAL	MAXIMUM TEMPERATURE*	@	MAXIMUM OPERATING INLET PRESSURE
Teflon®	150° F (66° C)	@	1000 psig (6.90 MPa)
PEEK™	250° F (121° C)	@	3600 psig (24.82 MPa)

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

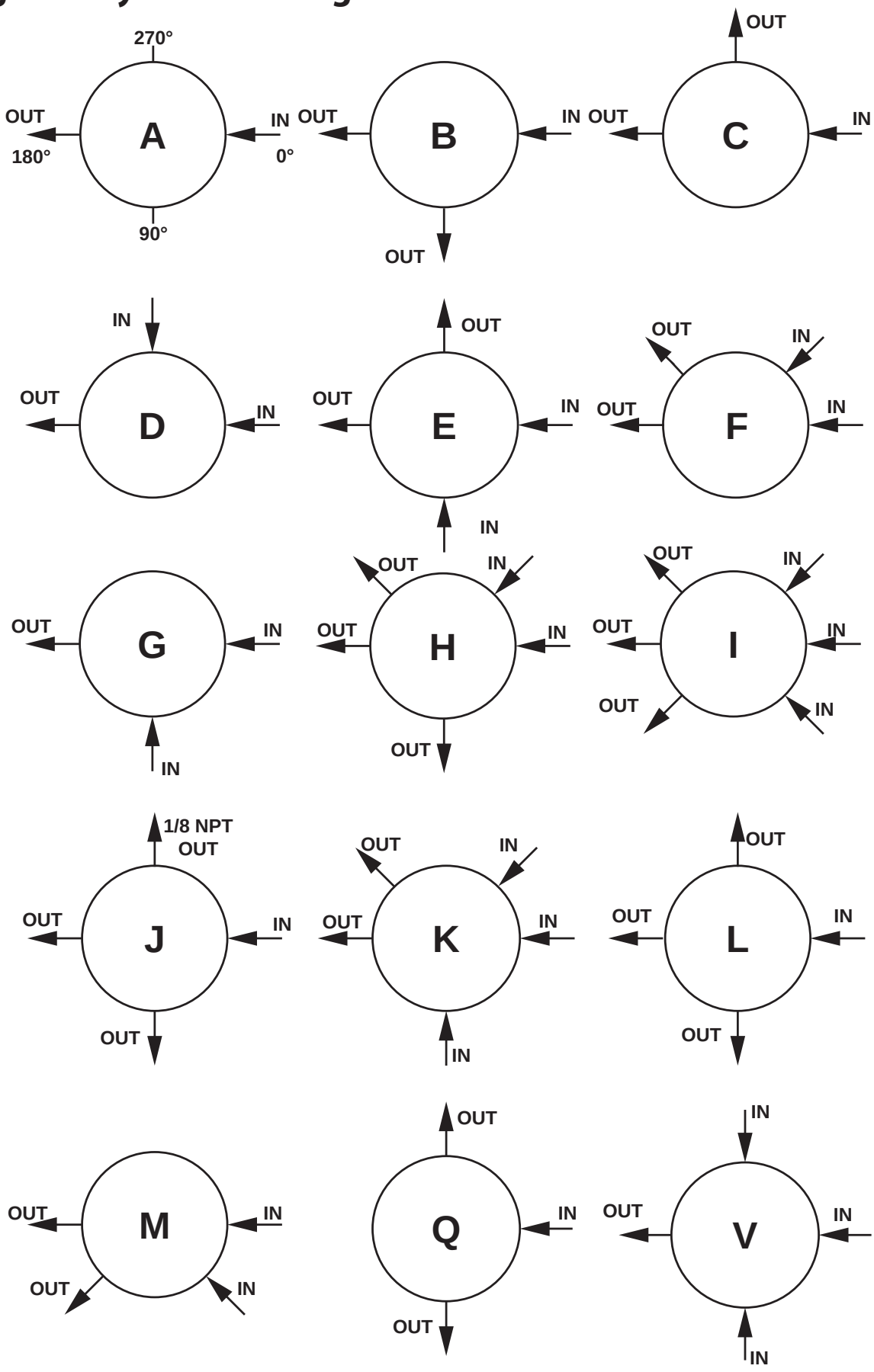
Outline & Mounting Dimensions

Panel mount option requires 1.390 (35.3mm) minimum diameter panel cut out



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Hastelloy® is a registered trademark of Haynes International, Inc.
Monel® is a registered trademark of Special Metals Corporation.
Teflon® and Tefzel® are registered trademarks of the DuPont Company.
Kalrez® and Viton® are registered trademarks of DuPont Dow Elastomers.
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