

GO REGULATOR

UCP-1

Precision Pressure Regulator



The model UCP-1 offers the user an ultra compact pressure regulator for use in high purity systems for the semiconductor industry. Meeting the highest purity standards and low particle generation of the semiconductor industry, this unit features internal components with standard surface finishes better than 25 Ra. The UCP-1 was computer designed to ensure a laminar flow transition from the flow control orifice to the outlet port. This design ensures virtually zero particle entrapment and efficient purge cycles.

Features & Specifications

- | | |
|---|--|
| <ul style="list-style-type: none">• 316 Stainless Steel Construction• Inlet 300 psig max. with Viton® or Kalrez® Seats; 3600 psig max. with Tefzel®, Polyimide, or Kel-F Seats• 1 x 10⁻⁹ atm cc/sec, Inboard Leak Spec | <ul style="list-style-type: none">• Outlet 10, 25, 50, 100, 250 and 500 psig• C_v Flow 0.025, 0.06, or 0.2• 1/4" Male or Female VCR Compatible |
|---|--|

Applications

- | | |
|---|---|
| <ul style="list-style-type: none">• Bulk Inert Gas Distribution• Diffusion Furnaces• Epitaxial Reactors• Specialty Gas Distribution• Manufacturing Tool | <h3>Options</h3> <ul style="list-style-type: none">• Corrosion Resistant Materials of Construction• 15 Ra, 10 Ra or 4 Ra internal surface finish |
|---|---|

Options

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UCP-1

Precision Pressure Regulator

How to Order

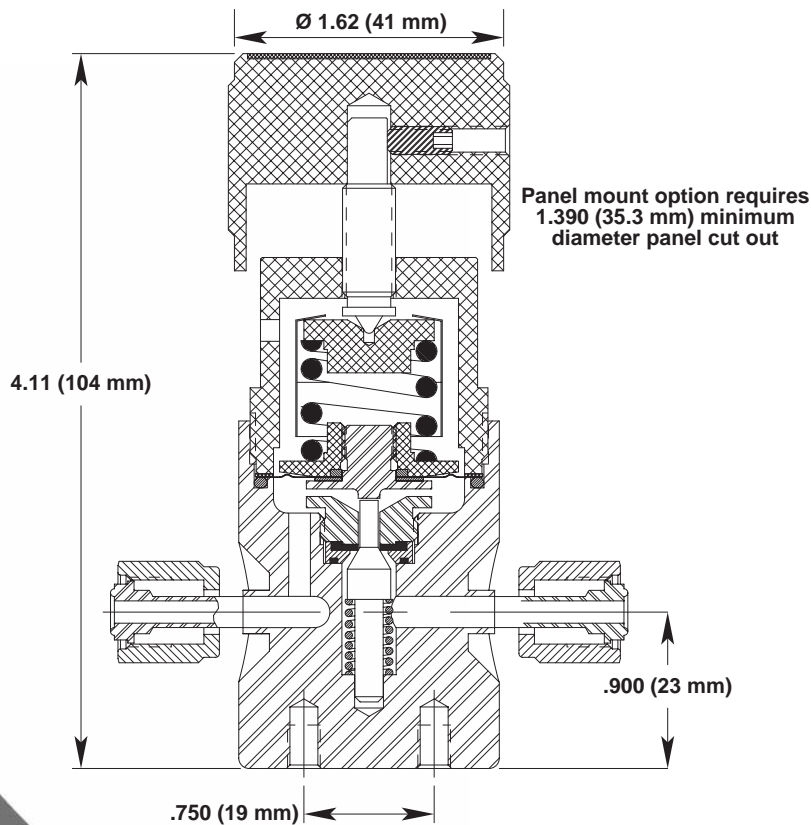
See page 8 for standard configurations. For additional configurations, consult the factory.
See page 10 for port locations.

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-F81)	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.
Tefzel® and Teflon® are registered trademarks of Dupont.

Outline and Mounting Dimensions



For flow curve information go to www.goreg.com/flow_ucp1.htm

UCP-1 Series - Pressure Reducing Regulator

Material of Body

1 S.S. 316L, Standard

Port Configuration (Ref. Dwg. 102191)

A

Process & Gauge ports

1	1/4" FVCR Process Ports, 1/4" FVCR Gauge Ports
2	1/4" FVCR Process Ports, 1/4" MVCRC Gauge Ports
4	1/4" Swivel MVCRC Process Ports, 1/4" FVCR Gauge Ports
5	1/4" Swivel MVCRC Process Ports, 1/4" Swivel MVCRC Gauge Ports
7	1/4" Tube Stubs at all Ports, 3.43 End to End (1.000 Stubs)
8	1/4" Tube Stubs at all Ports, 7.43 End to End (3.000 Stubs)
M	1/4" Fixed MVCRC Process Ports, 1/4" FVCR Gauge Ports
N	1/4" Fixed MVCRC Process Ports, 1/4" Swivel MVCRC Gauge Ports
O	1/4" Fixed MVCRC Process Ports, 1/4" Fixed MVCRC Gauge Ports

Surface Finish of Diaphragm Cavity

1 <25 Ra

Seat Material

A	Tefzel
C	Polyimide
H	PCTFE (formerly Kel-F 81)
I	High Density Teflon
Q	PEEK

Flow Coefficient (Cv)

3	0.06
5	0.2
C	0.025

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

Diaphragm Type

1	Standard Diaphragm
2	Diaphragm Attached Poppet

O-Ring / Diaphragm Backing

1	Teflon / SS
7	Viton / SS

Cap Assembly

1	Standard, Aluminum
4	Panel Mount, Aluminum
5	Captured Vent, Aluminum
7	Captured Vent, S.S.
B	Fine Adjust, 1 3/8" Panel Mount, Aluminum

UCP 1 -

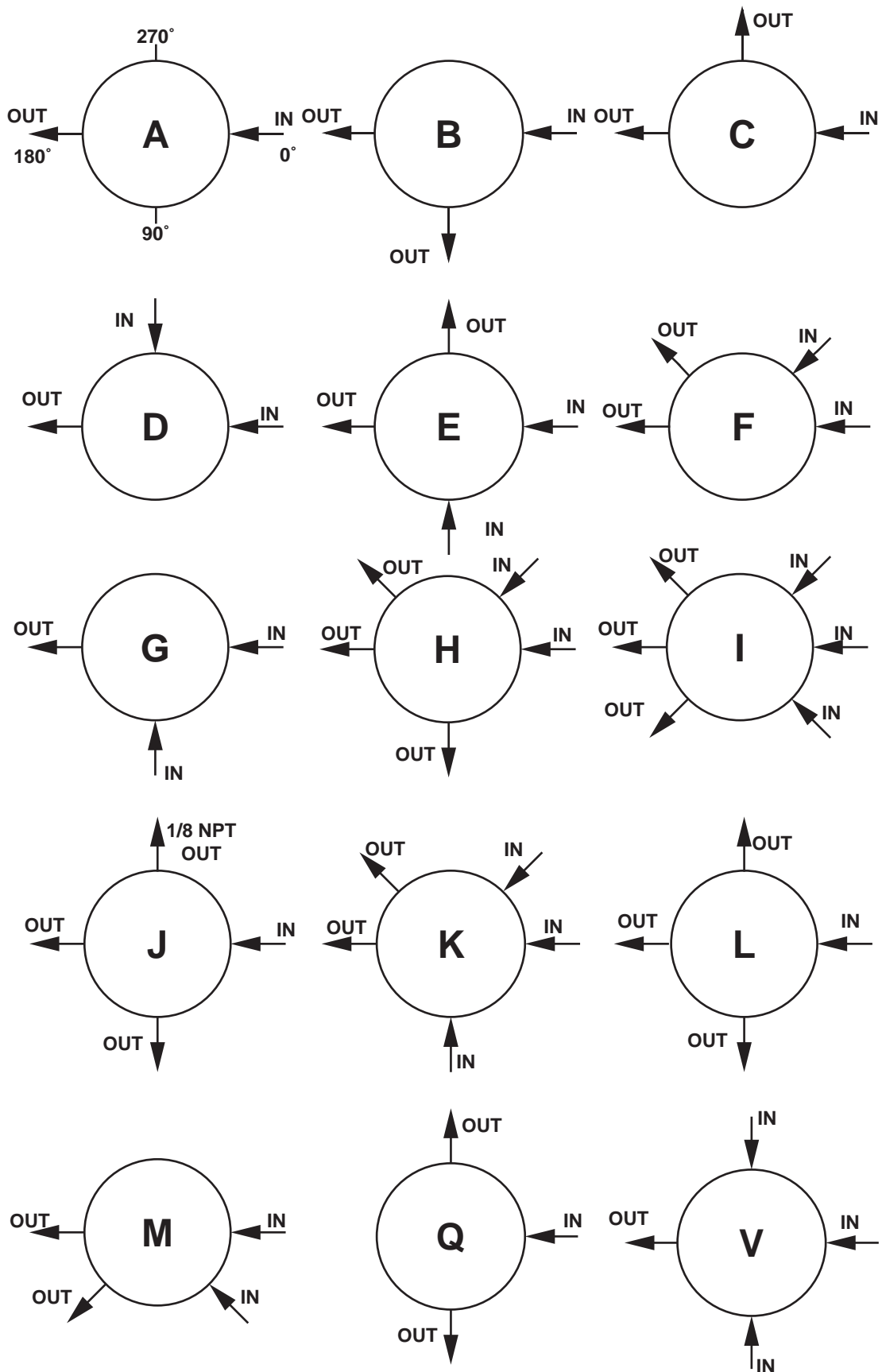
Material

Port
Config.Process
& Gauge
portCavity
FinishSeat
Material

Flow (Cv)

Control
RangeDiaphragm
TypeO-
Ring/Dia
BackCap
Assembly

PORT LOCATIONS (PRECISION PRESSURE REGULATOR)



LOCATION OF PORTS FROM
TOP VIEW