



SERIES AP 1100

ABSOLUTE REGULATOR

Low flow — sub-atmospheric pressure

- Single stage
- Hastelloy® alloy C-22® or SS 316L VAR secondary remelt construction
- Surface finish
15 Ra max/10 Ra avg
(10, 7 & 5 Ra max options)
- Only one nonmetallic seal (PCTFE) in the process stream
- Cleaned, assembled and packaged for high purity semiconductor applications
- Flow rate to 500 sccm
- Vacuum to 300 psig (21 bar) inlet, 100 torr to 10 psig (.7 bar) outlet
- Installation and operating instructions available at www.aptech-online.com in the Tech Briefs section

Operating Parameters

Source pressure	vacuum to 300 psig (21 bar)
Delivery pressure AP 1101	100 mm Hg absolute to 10 psig
Proof pressure	500 psig (34 bar)
Burst pressure	8,000 psig (552 bar)

Other Parameters

Inlet/outlet connectors	1/4 or 3/8 inch face seal or tube weld
Bonnet port	1/8 inch NPT
Flow coefficient (Cv)	0.05
Internal volume	0.49 in ³ (8 cm ³)
Operating temperature	-40° to +160°F (-40° to +71°C)
Surface finish	15 µin Ra max / 10 µin. Ra avg. (0.4/0.25 µm) standard; 10 µin (0.25 µm); 7 µin (0.18 µm); and 5 µin (0.13 µm) Ra max optional
Inboard leakage	2 x 10 ⁻¹⁰ sccs
Outboard leakage	2 x 10 ⁻⁹ sccs He at 300 psig inlet pressure
Leakage across seat	4 x 10 ⁻⁸ sccs He at 300 psig inlet pressure
Installation	surface or panel (optional)

Materials

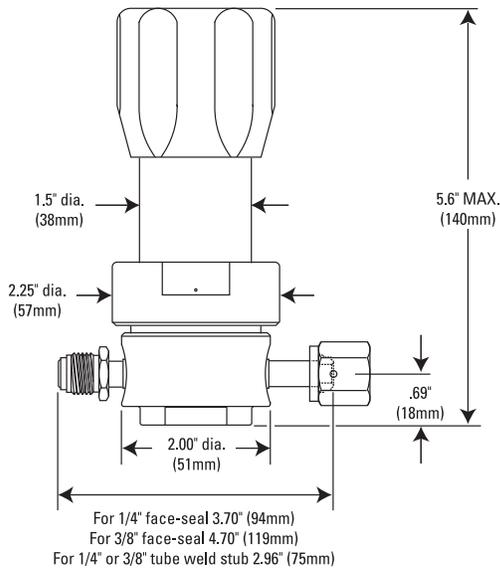
	Series AP 1100 S Noncorrosive	Series AP 1100 SH Corrosive (SHP* opt)	Series AP 1100 H Corrosive
Wetted Parts			
Body	SS 316L secondary remelt	SS 316L secondary remelt	Hastelloy alloy C-22
Poppet, nozzle, diaphragm	SS 316L	Hastelloy alloy C-22	Hastelloy alloy C-22
Finish	electropolished and passivated	electropolished and passivated	electropolished
Seat	PCTFE	PCTFE	PCTFE

All specifications subject to change without notice.
*SHP option Hastelloy poppet and diaphragm only.

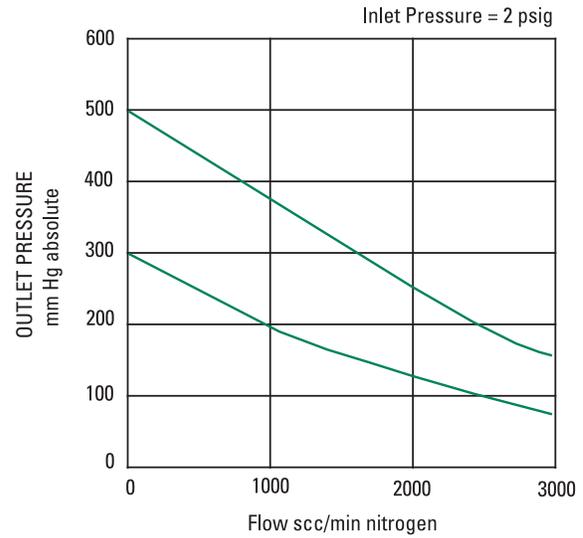
Hastelloy® C-22® Haynes Corporation

ULTRACLEAN TECHNOLOGY BACKED BY SERVICE AND SUPPORT

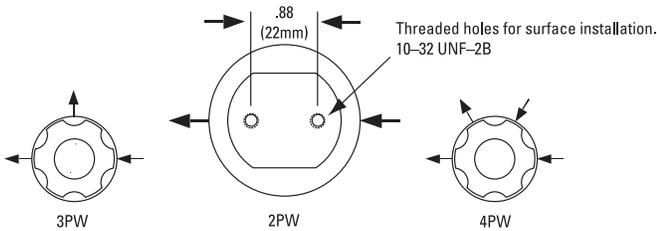
DIMENSIONAL INFORMATION



All dimensions in inches (mm). Metric dimensions are for reference only.



PORTING CONFIGURATIONS



CAUTION: Product selection is the sole responsibility of the user, regardless of any recommendations or suggestions made by the factory. The user shall make selections based upon their own analysis and testing with regard to function, material compatibility and product ratings. Proper installation, operation and maintenance are also required to assure safe, trouble free performance.

ORDERING INFORMATION

Sample Order Number **AP 1101SM 4PW FV4 FV4 V3 V3**

AP 1101 | Series AP 1101 = 100 mm Hg – 10 psig

S | Material

S = Stainless steel (SS)
SH = SS/Hastelloy internals
SHP = SS/Hastelloy poppet and diaphragm
H = Hastelloy alloy C-22

M | Surface Finish Options

M = 10 μ m. Ra max
V = 7 μ m. Ra max
X = 5 μ m. Ra max

4PW | Ports

2PW = 2 ports butt weld
3PW = 3 ports butt weld
4PW = 4 ports butt weld

FV4 FV4 | Connections Inlet / Outlet

FV4 = 1/4 inch face seal female
MV4 = 1/4 inch face seal male
FV6 = 3/8 inch face seal female
MV6 = 3/8 inch face seal male

Tube weld stub available.

V3 V3 | Gauges* Source / Delivery

0 = No gauge
V3 = 30-0-30 psig/bar
L = 30-0-60 psig/bar

* Standard gauge ports are 1/4 inch face seal male (1/4 inch female available).

| Options

P = Panel installation**

** On panel mount option, bonnet port is not threaded. Panel hole 1.56" diameter.