

# SERIES AZ 1100

## ABSOLUTE REGULATOR

Low flow — sub-atmospheric pressure



- Single stage
- SS 316L construction
- 10  $\mu$ m. surface finish (25  $\mu$ m. optional)
- 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
- Knob LOTO (refer to AP KL data sheet)
- Installation and operating instructions available at [www.aptech-online.com](http://www.aptech-online.com) in the Tech Briefs section

### Operating Parameters

Source pressure	vacuum to 300 psig (21 bar)
Delivery pressure AZ 1101	100 mm Hg absolute to 10 psig
Proof pressure	150% of operating pressures
Burst pressure	300% of operating pressures

### Other Parameters

Inlet/outlet connectors	1/4 or 3/8 inch face seal or tube weld
Flow coefficient (Cv) <sup>***</sup>	0.05
Internal volume	0.49 in <sup>3</sup> (8 cm <sup>3</sup> )
Operating temperature	-40° to +160°F (-40° to +71°C)*
Surface finish	10 $\mu$ m. (0.25 $\mu$ m) Ra avg. standard 25 $\mu$ m. (0.62 $\mu$ m) Ra avg. optional
Inboard leakage	2 x 10 <sup>-10</sup> sccs
Outboard leakage	2 x 10 <sup>-9</sup> sccs He
Leakage across seat	4 x 10 <sup>-8</sup> sccs He
Installation	surface or panel (optional)

\*VS option 14° to 194°F (-10° to + 90°C).

\*\*\*A pressure regulator Cv is a nominal value which indicates the point of choked flow. Please refer to a flow curve or a recommendation guide for usable flow range.

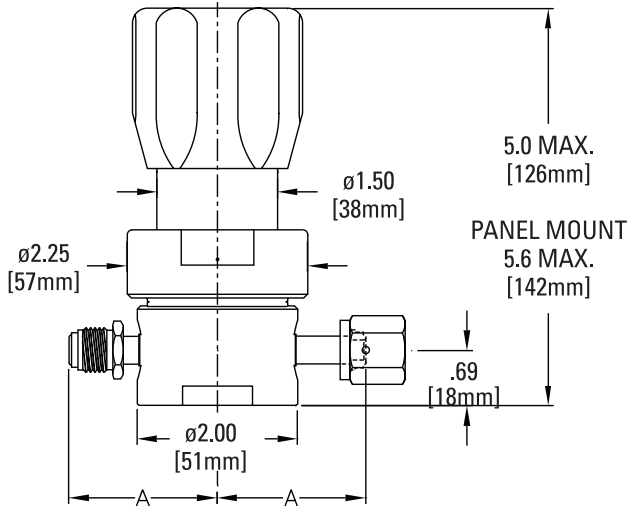
### Materials

	Series AZ 1100 S	Series AZ 1100 SHP
Wetted Parts		
Body, nozzle	SS 316L**	SS 316L**
Poppet, diaphragm	SS 316L	Ni-Cr-Mo alloy / UNS N06022
Finish	electropolished and passivated	electropolished and passivated
Seat	PCTFE	PCTFE

\*\*Please refer to product note PN 414 regarding single melt 316L SS material.  
All specifications subject to change without notice.

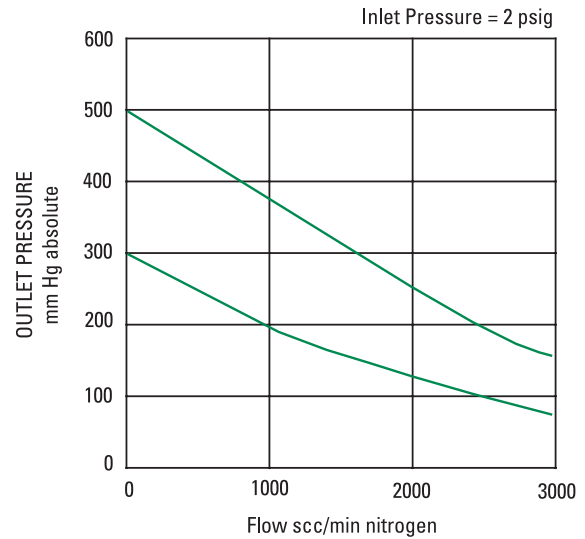
# ULTRACLEAN TECHNOLOGY BACKED BY SERVICE AND SUPPORT

## DIMENSIONAL INFORMATION

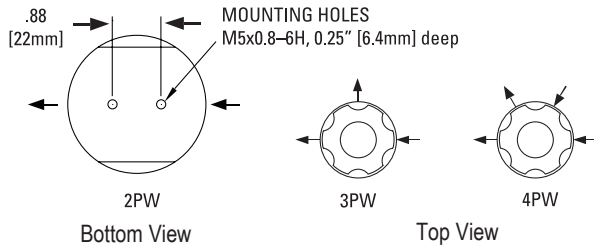


All dimensions in inches. Metric dimensions (mm) are for reference only.

Face Seal	A	
	in	mm
1/4"	1.85 ±.01	47
3/8"	2.35 ±.02	60



## 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	AZ 1101SQ 4PW FV4 FV4 V3 V3
<b>AZ 1101</b>   Series	AZ 1101 = 100 mm Hg – 10 psig
<b>S</b>   Material	S = Stainless steel (SS) SHP = SS/Ni-Cr-Mo alloy poppet and diaphragm
<b>Q</b>   Surface Finish Options	Q = 25 µin. Ra avg.
<b>4PW</b>   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\*\*  
KL = Knob LOTO  
(refer to AP KL data sheet)

\*\* Panel hole 1.56" diameter.

AP Tech has product options and variations which are not documented in data sheets. If you have a model number that is not defined by the ordering information, please consult the factory or your local representative.