



SERIES AZ 1500

TIED DIAPHRAGM REGULATOR

Low Flow — High Pressure

- SS 316L construction
- 10 μ m. surface finish (25 μ m. optional)
- Vacuum to 3500 psig (241 bar) inlet
HR option to 4,500 psig (310 bar)
- 1 to 150 psig (0.07 to 10 bar) outlet
- Cleaned, assembled and packaged for high purity semiconductor applications
- Regulator of choice for low flow source cabinet applications
- Knob LOTO (refer to AP KL data sheet)
- Installation and operating instructions available at www.aptech-online.com in the Tech Briefs section

Operating Parameters

Source pressure	vacuum to 3,500 psig (241 bar) HR option vacuum to 4,500 psig (310 bar)
Delivery pressure	AZ 1502 1 to 30 psig (0.07 to 2 bar) AZ 1506 2 to 60 psig (0.14 to 4 bar) AZ 1510 2 to 100 psig (0.14 to 7 bar) AZ 1515 5 to 150 psig (.34 to 10 bar)
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) ^{***}	0.09 (0.15 HF option)
Internal volume	0.51 in ³ (8.4 cm ³)
Operating temperature	-40° to +160°F (-40° to +71°C)*
Surface finish	10 μ m. (0.25 μ m) Ra avg. standard 25 μ m. (0.62 μ m) Ra avg. optional
Inboard leakage	2 x 10 ⁻¹⁰ sccs
Outboard leakage	2 x 10 ⁻⁹ sccs He
Leakage across seat	4 x 10 ⁻⁸ sccs He
Installation	surface or panel (optional)
Supply pressure effect	0.25 psig per 100 psig source pressure change HF 0.75 psig per 100 psig source pressure change

*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.

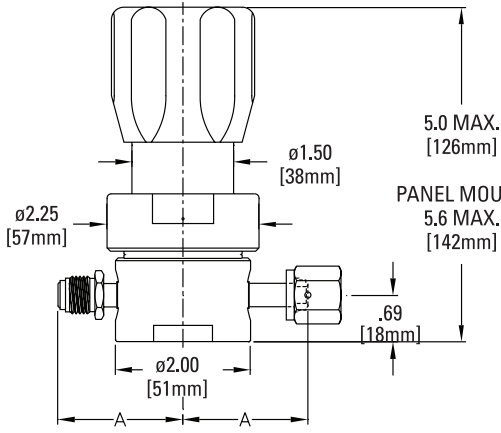
Materials

	Series AZ 1500 S	Series AZ 1500 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 (Polyimide optional)	PCTFE

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

ULTRACLEAN BY DESIGN AND MANUFACTURING

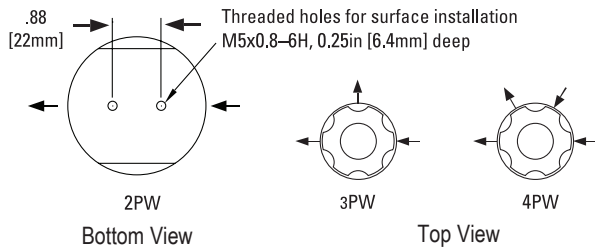
DIMENSIONAL INFORMATION



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 1510SQ 2PW FV4 FV4

AZ 1510 | Series

AZ 1502 = 1-30 psig (.07 to 2 bar)
 AZ 1506 = 2-60 psig (.14 to 4 bar)
 AZ 1510 = 2-100 psig (.14 to 7 bar)
 AZ 1515 = 5-150 psig (.34 to 10 bar)

S | Material

S = Stainless steel
 SHP = SS/Ni-Cr-Mo alloy poppet and diaphragm

Q | Surface Finish Option

Q = 25 µin. Ra avg.

2PW | 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

Gauges*
Source / Delivery

0 = No gauge
 V3 = 30-0-30 psig/bar
 L = 30-0-60 psig/bar
 1 = 30-0-100 psig/bar
 H = 30-0-160 psig/bar
 10 = 0-1000 psig/bar
 40 = 0-4000 psig/bar
 50 = 0-5000 psig/bar

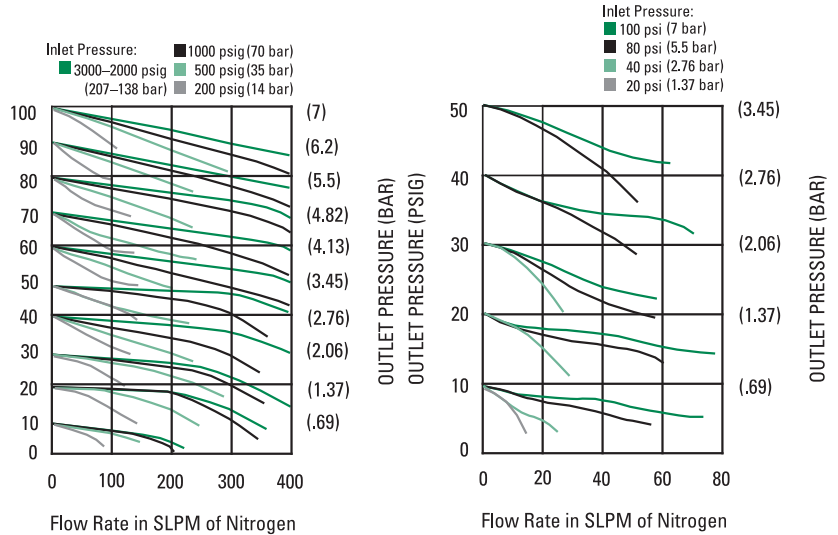
* Standard gauge port is 1/4 inch face seal male (1/4 inch face seal female are available).

Options

VS = Polyimide seat
 P = Panel installation**
 HR = High inlet rating***
 HF = High flow
 KL = Knob LOTO (refer to AP KL data sheet)

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.

**Panel hole 1.56" diameter.
 ***HR option not available with 3/8 inch fittings, tube stubs, nor with HF option.



MODEL

AZ 1500 HF

Flow Curve at 150 psig Inlet Pressure

