APTech
ADVANCED PRESSURE TECHNOLOGY

SERIES AP 1500

TIED DIAPHRAGM REGULATOR

Low Flow — High Pressure

- Single stage
- Hastelloy® alloy C-22® or SS 316L VAR secondary remelt construction
- Cleaned, assembled and packaged for high purity semiconductor applications
- 15 µin. surface finish (10, 7 and 5 µin. opt)
- Vacuum to 3,500 psig (241 bar) inlet
- No threads in contact with fluid media
- Industry standard for cylinder applications

Operating Parameters

Source pressure		vacuum to 3,500 psig (241 bar)
Delivery pressure	AP 1502	1 to 30 psig (0.07 to 2 bar)
	AP 1506	2 to 60 psig (0.14 to 4 bar)
	AP 1510	2 to 100 psig (0.14 to 7 bar)
Proof pressure		5,000 psig (345 bar)
Burst pressure		10,000 psig (690 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)	0.09
Internal volume	0.51 in^3 (8.4 cm^3)
Operating temperature	-40° to +160°F (-40° to +71°C)
Surface finish	15 µin. (0.4 µm) Ra max standard; 10 µin (0.25 µm); 7 µin (0.18 µm); and 5 µin (0.13 µm) optional
Inboard leakage	2 x 10^{-10} sccs
Outboard leakage	2 x 10^{-9} sccs He at 1,500 psig inlet pressure
Leakage across seat	4 x 10^{-8} sccs He at 1,000 psig inlet pressure
Installation	surface or panel (optional)
Delivery pressure rise	0.25 psig per 100 psig source pressure drop

Materials

Type of Service	Series AP 1500 S Noncorrosive	Series AP 1500 SH Corrosive	Series AP 1500 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 (Vespel® optional)	PCTFE	PCTFE

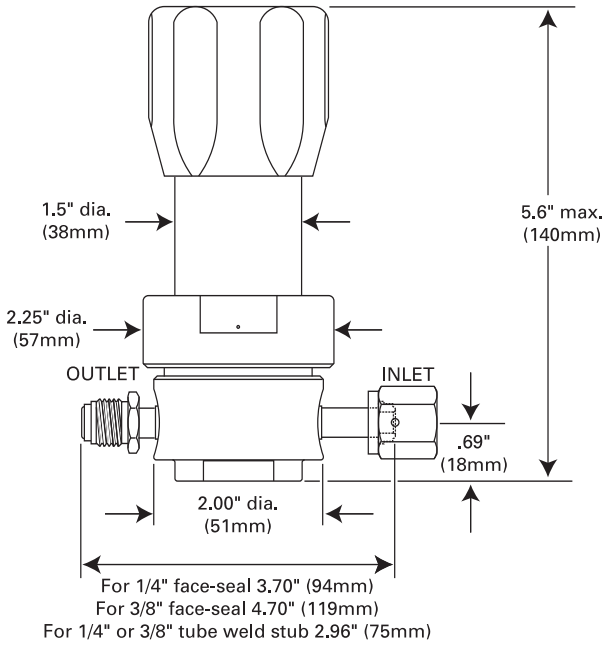
All specifications subject to change without notice.

Hastelloy® C-22® Haynes Corporation Vespel® DuPont

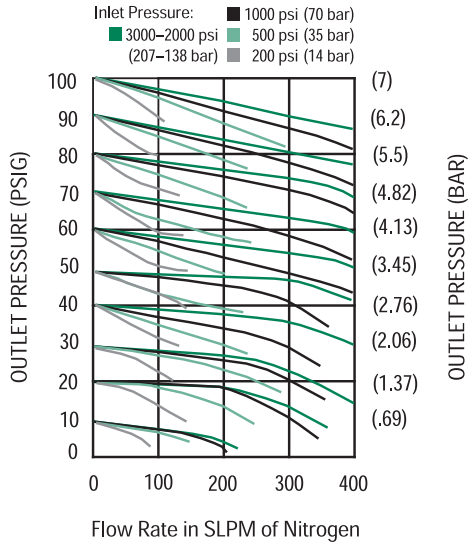
ENGINEERING DATA — SERIES AP 1500 TIED DIAPHRAGM REGULATOR

ULTRACLEAN TECHNOLOGY BACKED BY SERVICE AND SUPPORT

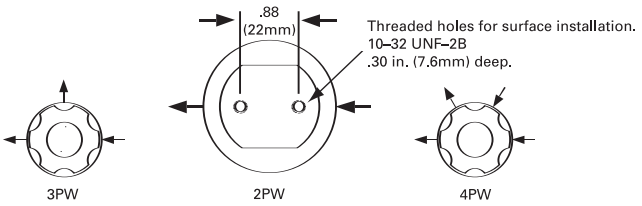
DIMENSIONAL INFORMATION

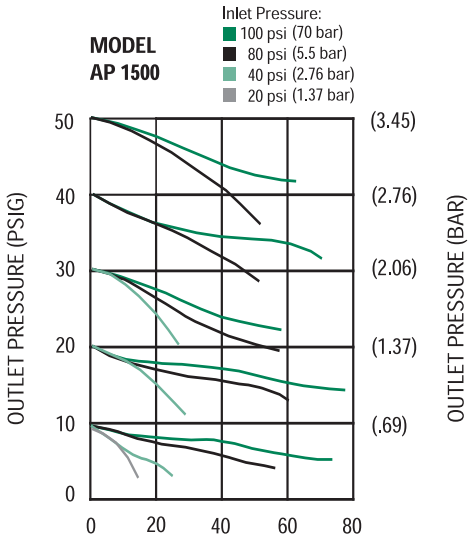


All dimensions in inches (mm). Metric dimensions are for reference only.



PORTING CONFIGURATIONS





ORDERING INFORMATION

Sample Order Number **AP 1510SM 4PW FV4 FV4 40 1 P**

AP 1510 | Series

AP 1502 = 1-30 psig (.07 to 2 bar)
AP 1506 = 2-60 psig (.14 to 4 bar)
AP 1510 = 2-100 psig (.14 to 7 bar)

S | Material

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

M | Surface Finish Options

M = 10 µin. Ra max
V = 7 µin. Ra max
X = 5 µin. 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

40 1 | Gauges* Source / Delivery

0 = No gauge
V3 = 30-0-30 psig/bar
L = 30-0-60 psig/bar
1 = 30-0-100 psig/bar
2 = 0-200 psig/bar
4 = 0-400 psig/bar
10 = 0-1000 psig/bar
40 = 0-4000 psig/bar

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

P | Options

P = Panel installation**
VS = Vespel seat

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