APTech
ADVANCED PRESSURE TECHNOLOGY

SERIES AP 1600

SINGLE STAGE REGULATOR

Low to intermediate flow

- High sensitivity
- Stainless steel 316L VAR secondary remelt construction
- Cleaned, assembled and packaged for high purity semiconductor applications
- Vacuum to 3,500 psig (241 bar) inlet
- Surface finish 15 Ra max/10 Ra avg (10, 7 & 5 Ra max options)
- Flow rates to 120 slpm
- 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); for AP 1601, 100 psig (7 bar)
Delivery pressure	AP 1601	1 to 10 psig (0.07 to 0.7 bar)
	AP 1602	1 to 30 psig (0.07 to 2 bar)
	AP 1606	2 to 60 psig (0.14 to 4 bar)
	AP 1610	2 to 100 psig (0.14 to 7 bar)
Proof pressure		4,000 psig (276 bar)
Burst pressure		8,000 psig (552 bar)

Other Parameters

Inlet/outlet connectors	1/4, 3/8 or 1/2 inch face seal or tube weld
Bonnet port	1/8 inch NPT
Flow coefficient (Cv)	0.13
Internal volume	0.82 in^3 (13.5 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 optionall
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 500 psig inlet pressure
Installation	surface or panel (optional)
Supply pressure effect	0.25 psig per 100 psig source pressure change

Materials

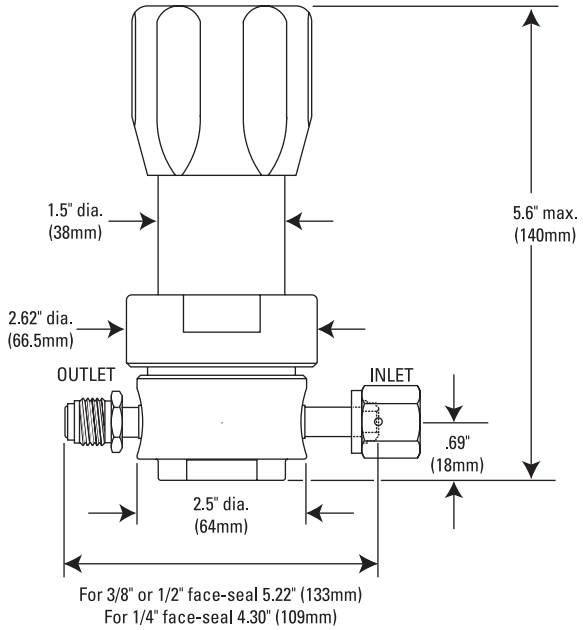
Type of Service	Series AP 1600 S Noncorrosive	Series AP 1600 SH Corrosive
Wetted Parts		
Body	SS 316L secondary remelt	SS 316L secondary remelt
Poppet, nozzle and diaphragm	SS 316L	Ni-Cr-Mo alloy / UNS N06022
Finish	electropolished and passivated	electropolished and passivated
Seat	PCTFE (Polyimide optional)	PCTFE

All specifications subject to change without notice.

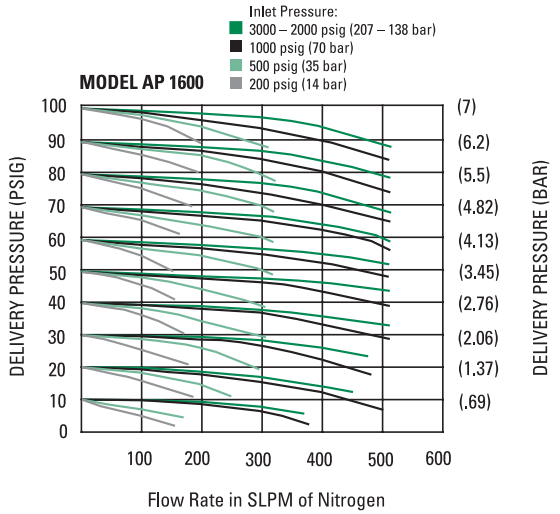
ENGINEERING DATA — SERIES AP 1600 SINGLE STAGE REGULATOR

SERVICE AND SUPPORT BEYOND COMPARE

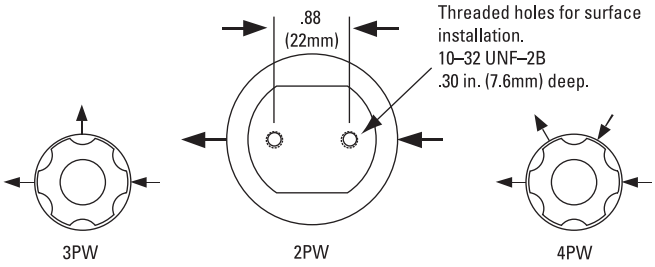
DIMENSIONAL INFORMATION

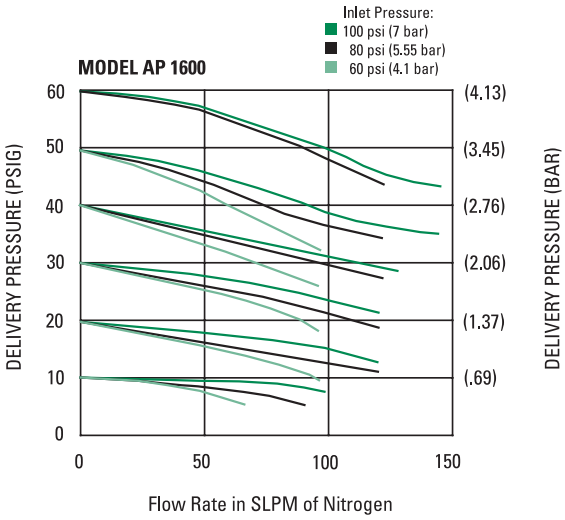


All dimensions in inches (mm). Metric dimensions are for reference only.



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 1602SM 4PW FV4 FV4 40 V3 P**

AP 1602 | Series
- AP 1601 = 1-10 psig (.07 to .7 bar)
- AP 1602 = 1-30 psig (.07 to 2 bar)
- AP 1606 = 2-60 psig (.14 to 4 bar)
- AP 1610 = 2-100 psig (.14 to 7 bar)

S | Material
- S = Stainless steel (SS)
- SH = SS/Ni-Cr-Mo alloy internals

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 V3 | Gauges* Source / Delivery
- 0 = No gauge
- V3 = 30-0-30 psig/bar
- L = 30-0-60 psig/bar
- 1 = 30-0-100 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 = Polyimide seat

** On panel mount option, bonnet port is not threaded. Panel hole 1.43" 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.