

SERIES AP 1000

SINGLE STAGE REGULATOR

Low to intermediate flow



- Hastelloy® alloy C-22® or SS 316L VAR secondary remelt construction
- 15 µin. surface finish (10, 7 and 5 µin. optional)
- Two Hastelloy C-22 internal options
- Vacuum to 3500 psig (241 bar) inlet
- Cleaned, assembled and packaged for high purity semiconductor applications
- Flow rates—Standard to 30 SLPM (1 SCFM) HF option to 120 SLPM (4 SCFM)
- Industry standard for point of use applications

Operating Parameters

Source pressure	vacuum to 3,500 psig (241 bar); (AP 1001, 300 psig [21 bar] maximum)
Delivery pressure	AP 1001 1 to 10 psig (0.07 to 0.7 bar)
	AP 1002 1 to 30 psig (0.07 to 2 bar)
	AP 1006 2 to 60 psig (0.14 to 4 bar)
	AP 1010 2 to 100 psig (0.14 to 7 bar)
	AP 1015 5 to 150 psig (0.34 to 10 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 (0.15 HF option)
Internal volume	0.49 in ³ (8 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 1500 psig inlet pressure
Leakage across seat	4 x 10 ⁻⁸ sccs He at 1000 psig inlet pressure
Installation	surface or panel (optional)
Delivery pressure rise	0.25 psig per 100 psig source pressure drop
HF	0.75 psig per 100 psig source pressure drop

Materials

Type of Service	Series AP 1000 S Noncorrosive	Series AP 1000 SH Corrosive (SHP* opt)	Series AP 1000 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.

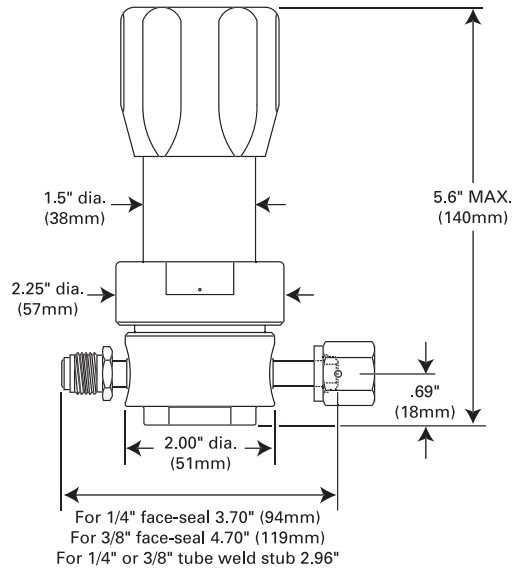
* SHP option, poppet and diaphragm Hastelloy C-22.

Hastelloy® C-22® Haynes Corporation

Vespel® DuPont

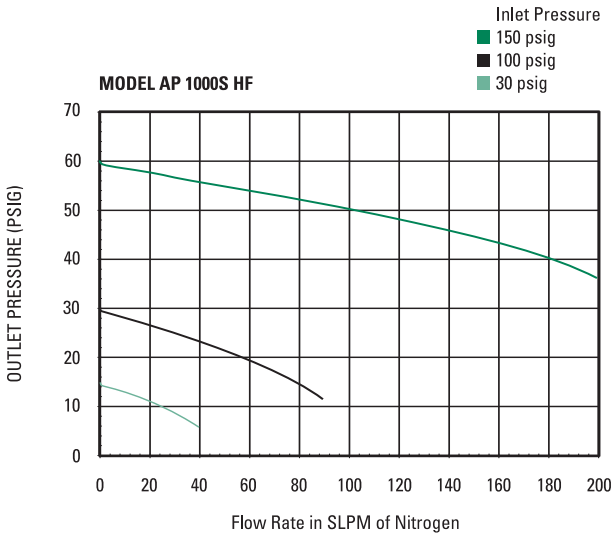
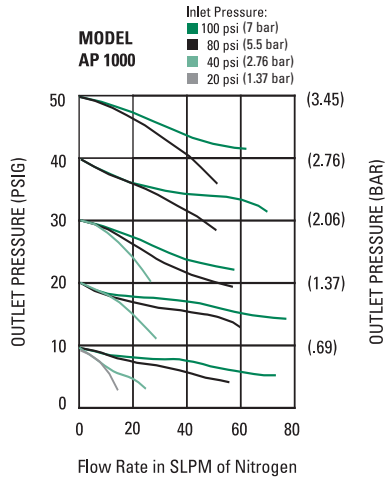
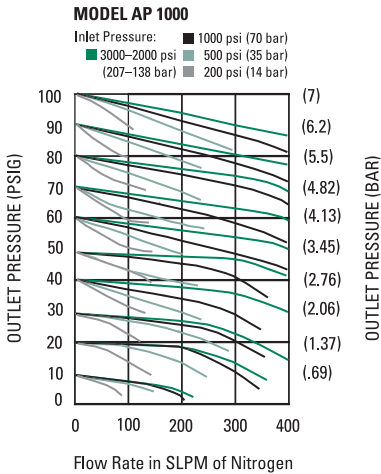
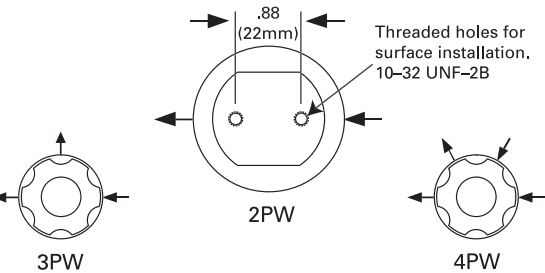
DEFINING NEW LEVELS OF ULTRACLEAN

DIMENSIONAL INFORMATION



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

PORTING CONFIGURATIONS



ORDERING INFORMATION

Sample Order Number		AP 1010SM 2PW FV4 FV4	
AP 1010	Series	AP 1001 = 1-10 psig (.07 to .7 bar) AP 1002 = 1-30 psig (.07 to 2 bar) AP 1006 = 2-60 psig (.14 to 4 bar) AP 1010 = 2-100 psig (.14 to 7 bar) AP 1015 = 5-150 psig (.34 to 10 bar)	FV4 FV4 Connections Inlet / Outlet
S	Material	S = Stainless steel (SS) SH = SS/Hastelloy internals SHP = SS/Hastelloy poppet and diaphragm H = Hastelloy alloy C-22	Gauges* Source / Delivery
M	Surface Finish Options	M = 10 μ in. Ra V = 7 μ in. Ra X = 5 μ in. Ra	Options
2PW	Ports	2PW = 2 ports butt weld 3PW = 3 ports butt weld 4PW = 4 ports butt weld	
		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	
		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 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 = Panel installation** VS = Vespel seat HF = High flow ** On panel mount option, bonnet port is not threaded. Panel hole 1.56" diameter.	