

SERIES AP 1000

SINGLE STAGE REGULATOR

Low to intermediate flow



- SS 316L VAR secondary remelt or super alloy construction
- Surface finish
15 Ra max/10 Ra avg
(10, 7 & 5 Ra max options)
- Two corrosion resistant internal options
- Vacuum to 3500 psig (241 bar) inlet
- Flow rates—Standard to 30 SLPM (1 SCFM)
HF option to 120 SLPM (4 SCFM)
- Industry standard for point of use applications
- Knob LOTO option
(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);
AP 1001 and TF option		vacuum to 300 psig (21 bar)
Delivery pressure	AP 1001	0.5 to 10 psig (0.03 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)
	AP 1030	5 to 300 psig (0.34 to 21 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
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 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 optional Optional surface finishes meet or exceed 5 µin Ra average
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.

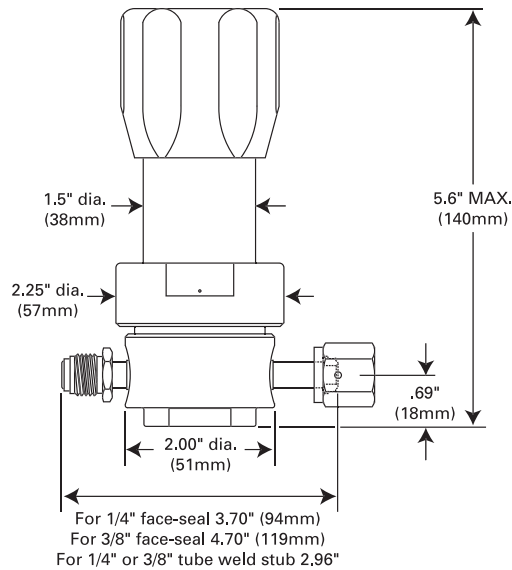
Materials

	Series AP 1000 S Noncorrosive	Series AP 1000 SH Corrosive (SHP** opt)	Series AP 1000 H Corrosive
Type of Service			
Wetted Parts			
Body	SS 316L secondary remelt	SS 316L secondary remelt	Ni-Cr-Mo alloy / UNS N06022
Poppet, nozzle, diaphragm*	SS 316L	Ni-Cr-Mo alloy / UNS N06022	Ni-Cr-Mo alloy / UNS N06022
Finish	electropolished and passivated	electropolished and passivated	electropolished
Seat	PCTFE (Polyimide & PTFE optional)	PCTFE (PTFE optional)	PCTFE (PTFE optional)

**SHP option Ni-Cr-Mo alloy poppet and diaphragm only.
All specifications subject to change without notice.

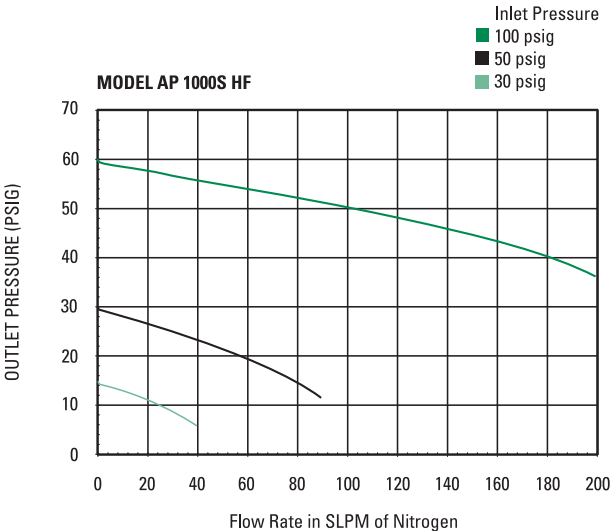
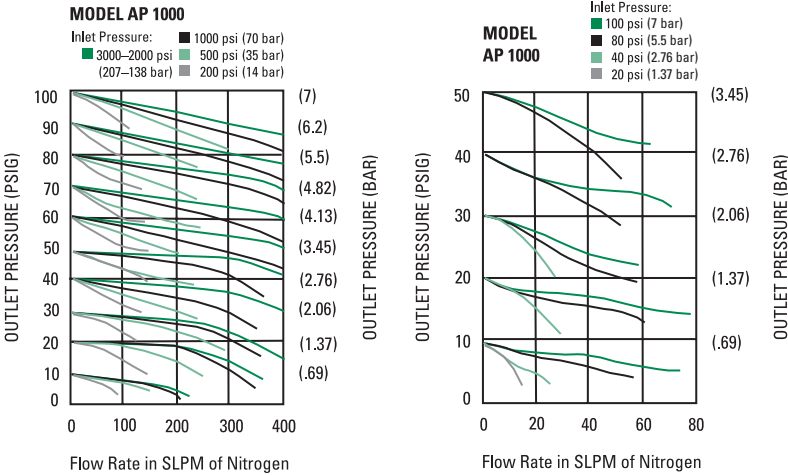
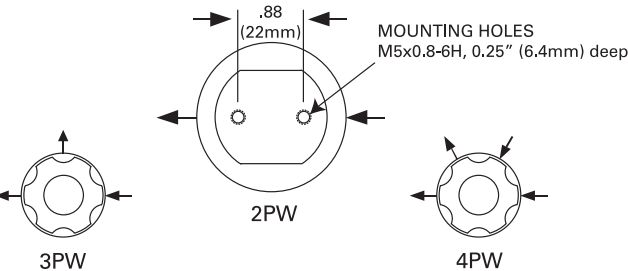
DEFINING NEW LEVELS OF ULTRACLEAN

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 1010SM 2PW FV4 FV4	
AP 1010	Series	AP 1001 = 0.5-10 psig (.03 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) AP 1030 = 5-300 psig (.34 to 21 bar)	FV4 FV4 Connections Inlet / Outlet
S	Material	S = Stainless steel (SS) SH = SS/Ni-Cr-Mo alloy internals SHP = SS/Ni-Cr-Mo alloy poppet and diaphragm H = Ni-Cr-Mo alloy	Gauges* Source / Delivery
M	Surface Finish Options	M = 10 µin. Ra V = 7 µin. Ra X = 5 µin. Ra	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).
2PW	Ports	2PW = 2 ports butt weld 3PW = 3 ports butt weld 4PW = 4 ports butt weld	Options

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.

**On panel mount option, bonnet port is not threaded. Panel hole 1.56" diameter.
***KL should be ordered with SC option.

P = Panel installation**
VS = Polyimide seat
TF = PTFE seat
HF = High flow
SC = Short bonnet***
KL = Knob LOTO***