

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
- Contamination free
- Vacuum to 3,500 psig (241 bar) inlet
- 15 μ in. max surface finish (10, 7 and 5 μ in. optional)
- Flow rates to 120 slpm

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 μ in. (0.4 μ m) Ra max standard; 10 μ in (0.25 μ m); 7 μ in (0.18 μ m); and 5 μ in (0.13 μ m) 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 500 psig inlet pressure
Installation	surface or panel (optional)
Delivery pressure rise	0.25 psig per 100 psig source pressure drop

Materials

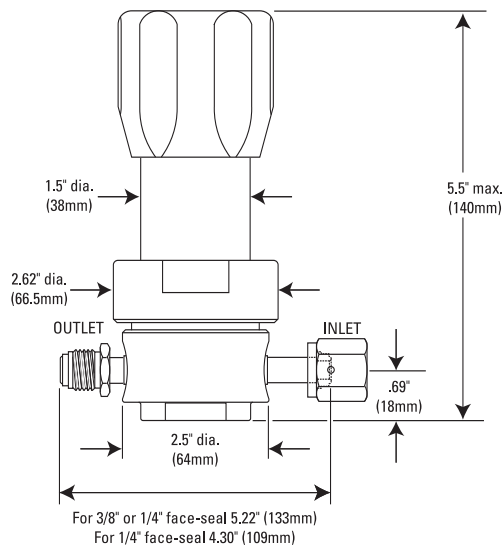
	Series AP 1600 S Noncorrosive	Series AP 1600 SH Corrosive
Type of Service		
Wetted Parts		
Body	SS 316L secondary remelt	SS 316L secondary remelt
Poppet, nozzle and diaphragm	SS 316L	Hastelloy® alloy C-22®
Finish	electropolished and passivated	electropolished and passivated
Seat	PCTFE (Vespel® optional)	PCTFE

All specifications subject to change without notice.

Hastelloy® C-22® Haynes Corporation Vespel® DuPont

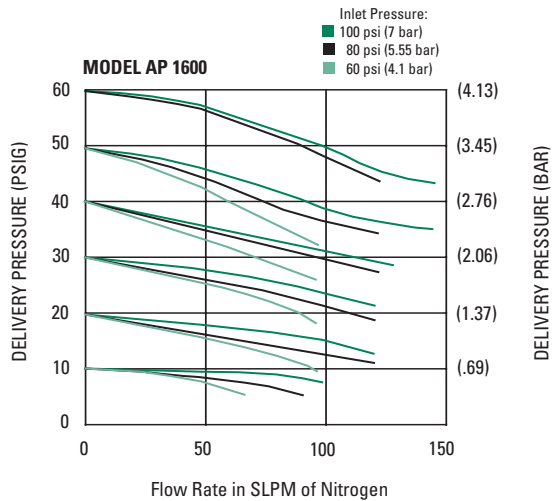
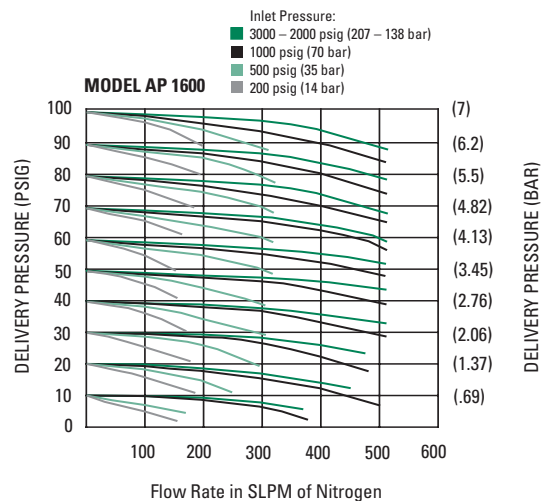
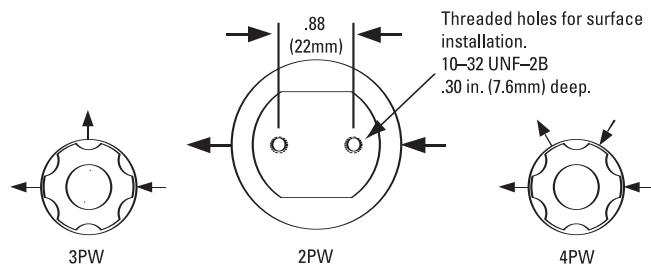
SERVICE AND SUPPORT BEYOND COMPARE

DIMENSIONAL INFORMATION



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

PORTING CONFIGURATIONS



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/Hastelloy internals

M | Surface Finish Options

M = 10 μ in. Ra max
 V = 7 μ in. Ra max
 X = 5 μ in. 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 = Vespel seat

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