

SERIES AP 1700

TWO-STAGE, TIED DIAPHRAGM REGULATOR

Low Flow — High Pressure



- Regulator of choice for B₂H₆ cylinder applications
- SS 316L VAR secondary remelt construction
- 15 µin. surface finish (10, 7 and 5 µin. opt)
- Vacuum to 3,500 psig (241 bar) inlet
- Cleaned, assembled and packaged for high purity semiconductor applications
- Two stage pressure reduction eliminates supply pressure effect

Operating Parameters

Source pressure	vacuum to 3,500 psig (241 bar)
Delivery pressure AP 1702	1 to 30 psig (0.07 to 2 bar)
AP 1706	2 to 60 psig (0.14 to 4 bar)
AP 1710	2 to 100 psig (0.14 to 7 bar)
First stage pressure	175 psig (12 bar) nominal
Proof pressure	4,000 psig (276 bar)
Burst pressure	8,000 psig (552 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)	0.05
Internal volume	0.92 in ³ (15.1 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	panel (optional)
Delivery pressure rise	0.05 psig per 100 psig source pressure drop

Materials

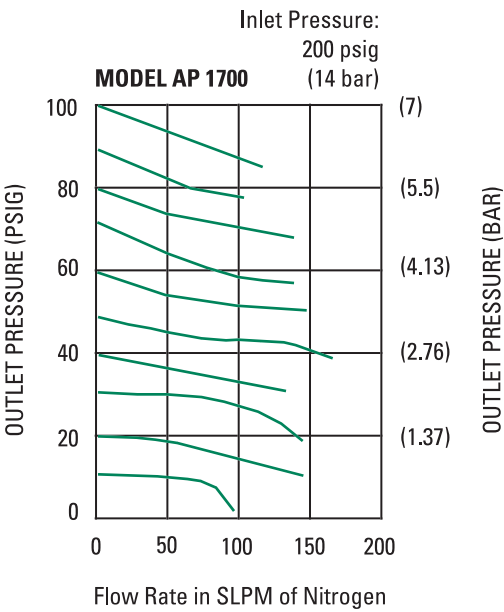
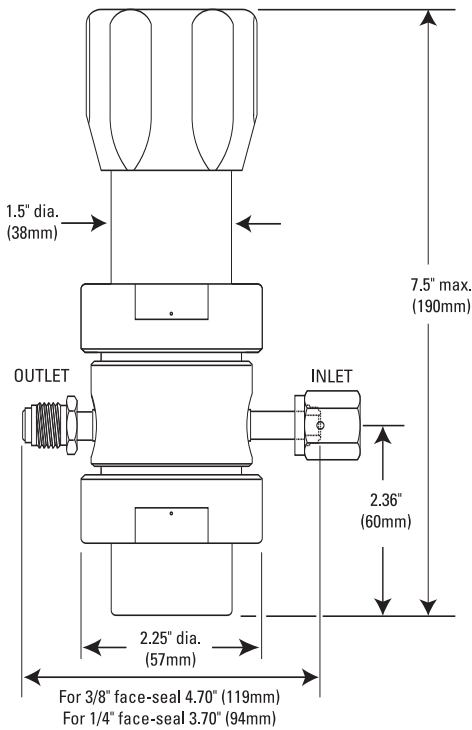
	Series AP 1700 S Noncorrosive	Series AP 1700 SH Corrosive
Type of Service Wetted Parts		
Body	SS 316L secondary remelt	SS 316L secondary remelt
Poppet, nozzle and diaphragm	SS 316L	Hastelloy® alloy C-22®
Finish	electropolished and passivated	electropolished and passivated
Seat	PCTFE (Vespel® optional)	PCTFE

All specifications subject to change without notice.

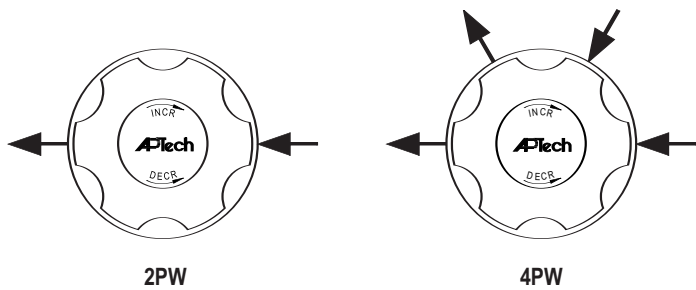
Hastelloy® C-22® Haynes Corporation Vespel® DuPont

SERVICE AND SUPPORT BEYOND COMPARE

DIMENSIONAL INFORMATION



PORTING CONFIGURATIONS



ORDERING INFORMATION

Sample Order Number		AP 1702SM 4PW FV4 FV4 40 V3 P	
AP 1702	Series	AP 1702 = 1-30 psig (0.07 to 2 bar) AP 1706 = 2-60 psig (.14 to 4 bar) AP 1710 = 2-100 psig (.14 to 7 bar)	
S	Material	S = Stainless steel (SS) SH = SS/Hastelloy 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 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 2 = 0-200 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 face seal female are available).	
P	Options	P = Panel installation ring** VS = Vespel seat ** On panel mount option, bonnet port is not threaded. Panel hole 1.56" diameter.	