



SERIES AP 2700

TWO-STAGE, TIED DIAPHRAGM REGULATOR

High Flow — High Inlet Pressure

- Regulator of choice for NF₃ and H₂ BSGS delivery of intermediate flows
- Flow rates to 150 slpm of NF₃ and 900 slpm of H₂ (based upon minimum inlet pressure of 200 psig (14 bar))
- Two stage pressure reduction eliminates supply pressure effect
- Surface finish
15 Ra max/10 Ra avg (10, 7 & 5 Ra max options)
- Vacuum to 3,500 psig (241 bar) inlet
- 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)
Delivery pressure AP 2702	1 to 30 psig (0.07 to 2 bar)
AP 2706	2 to 60 psig (0.14 to 4 bar)
AP 2710	2 to 100 psig (0.14 to 7 bar)
AP 2712	3 to 120 psig (0.21 to 8 bar)
First stage pressure	200 psig (14 bar) nominal
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)**	0.10
Internal volume	1.87 in ³ (30.6 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 at 1,500 psig inlet pressure
Leakage across seat	4 x 10 ⁻⁸ sccs He at 1,000 psig inlet pressure
Installation	panel (optional)
Supply pressure effect	0.01 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

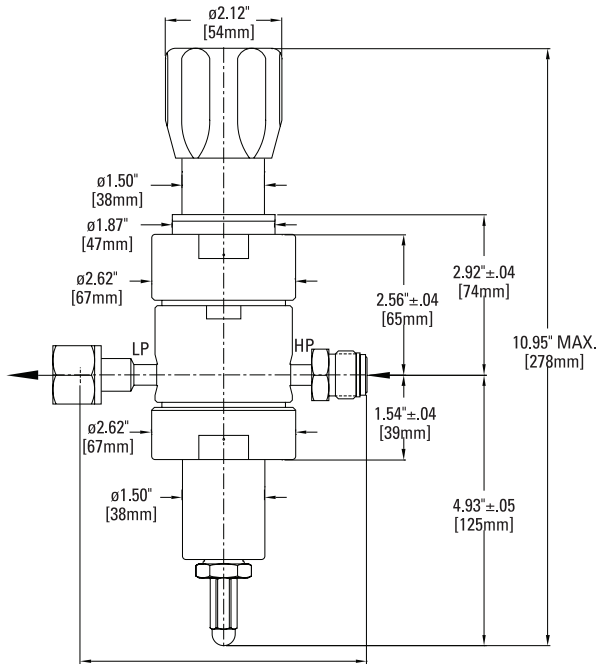
Type of Service	Series AP 2700 S Noncorrosive	Series AP 2700 SH Corrosive
Wetted Parts		
Body	SS 316L secondary remelt	SS 316L secondary remelt
Poppet, nozzle and diaphragm	SS 316L/Ni-Cr-Mo alloy / UNS N06022	Ni-Cr-Mo alloy / UNS N06022
Finish	electropolished and passivated	electropolished and passivated
Seat	PCTFE (Polyimide optional)	PCTFE

Note: AP Tech recommends monitoring the intermediate pressure (first stage outlet/second stage inlet) for safety. Please refer to product note 409 for further information.

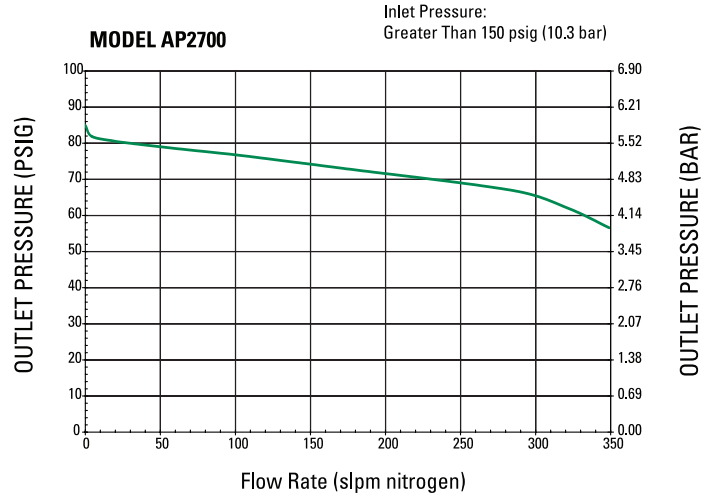
All specifications subject to change without notice.

SERVICE AND SUPPORT BEYOND COMPARE

DIMENSIONAL INFORMATION

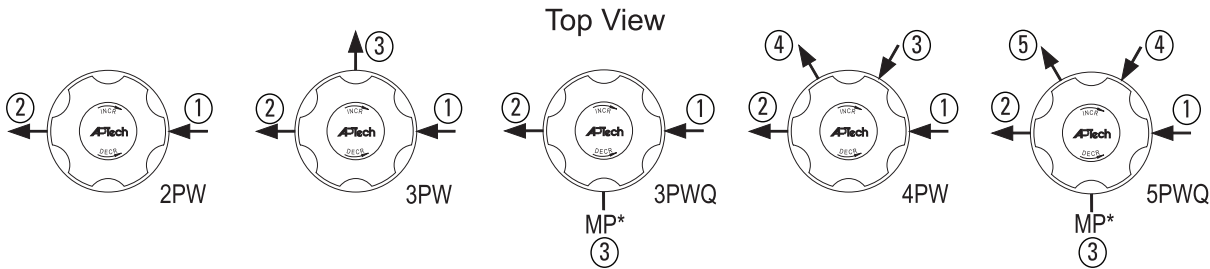


4.30" ±.02" [109mm] FOR 1/4" FACE SEAL
5.22" ±.03" [133mm] FOR 3/8" FACE SEAL



Note: AP Tech recommends MP port to enable monitoring of intermediate pressure. Please refer to product note 409 for further information.

PORTING CONFIGURATIONS



All dimensions in inches. Metric dimensions (mm) are for reference only. MP=Monitor port, first stage outlet pressure (second stage inlet pressure). Numbers at each port note order for specifying fitting type.

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 2702SM 5PWQ FV4 FV4 40 V3**

AP 2702 Series	AP 2702 = 1-30 psig (0.07 to 2 bar) AP 2706 = 2-60 psig (0.14 to 4 bar) AP 2710 = 2-100 psig (0.14 to 7 bar) AP 2712 = 3-120 psig (0.21 to 8 bar)
S Material	S = Stainless steel (SS) SH = SS with Ni-Cr-Mo alloy internals
M Surface Finish Options	M = 10 μin. Ra max V = 7 μin. Ra max X = 5 μin. Ra max
5PWQ Ports	2PW = 2 ports butt weld 3PW = 3 ports butt weld 3PWQ = 3 ports butt weld 4PW = 4 ports butt weld 5PWQ = 5 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
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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
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* Standard gauge and MP ports are 1/4 inch face seal male (1/4 inch face seal female are available).

Options	VS = Polyimide seat P = Panel installation ring** SC = Short bonnet*** KL = Knob LOTO***
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**On panel mount option, bonnet port is not threaded. Panel hole 1.56" diameter.

***KL should be ordered with SC option.

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.