ADVANCED PRESSURE TECHNOLOGY

SERIES AP 2700

TWO-STAGE, TIED DIAPHRAGM REGULATOR

High Flow — High Inlet Pressure

- Regulator of choice for NF_3 and H_2 BSGS delivery of intermediate flows
- Flow rates to 150 slpm of NF_3 and 900 slpm of H_2 (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
- 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		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)	0.105
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
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 decrease	0.01 psig per 100 psig source pressure drop

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/Hastelloy® alloy C-22®	Hastelloy® alloy C-22®
Finish	electropolished and passivated	electropolished and passivated
Seat	PCTFE (Vespel® optional)	PCTFE

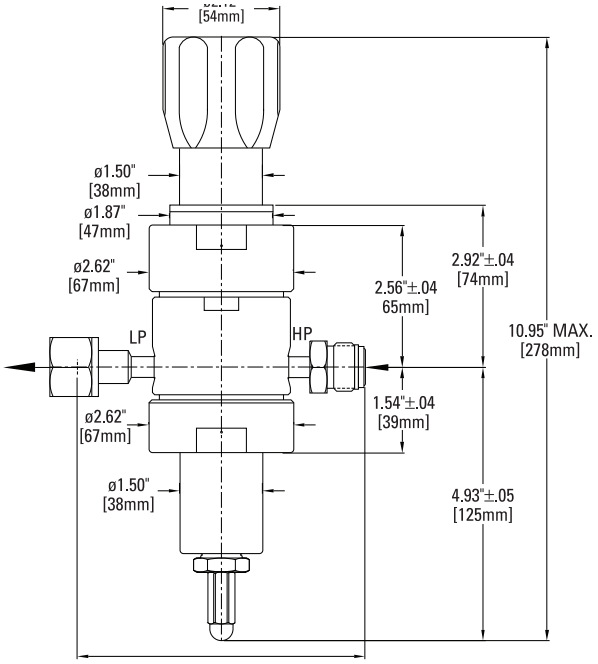
All specifications subject to change without notice. Hastelloy® C-22® Haynes Corporation Vespel® DuPont

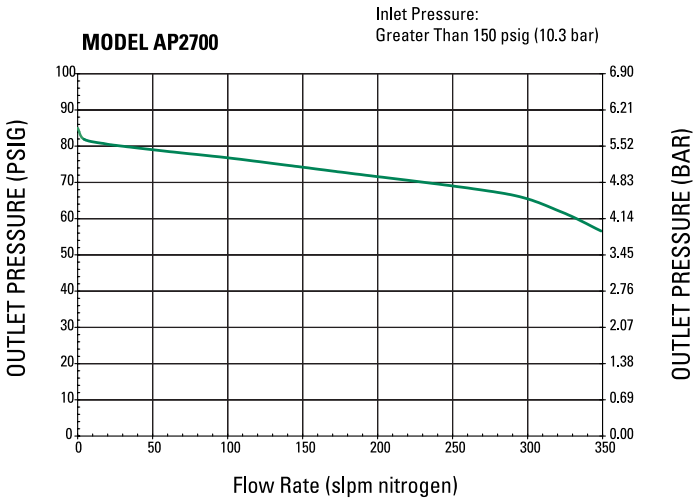
Note: AP Tech recommends monitoring the intermediate pressure (first stage outlet/second stage inlet) for safety. Please refer to product note 409 for further information.

ENGINEERING DATA — SERIES AP 2700 TWO STAGE REGULATOR

SERVICE AND SUPPORT BEYOND COMPARE

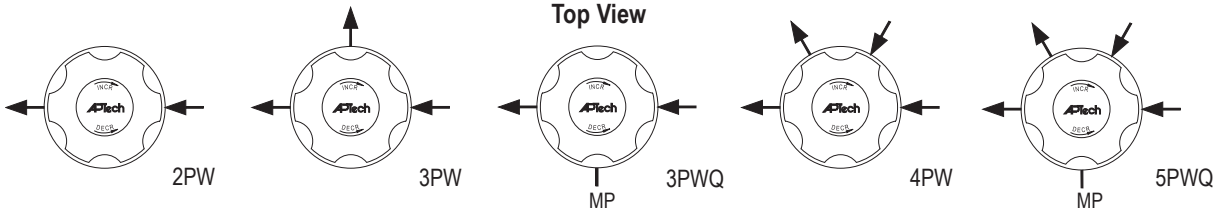
DIMENSIONAL INFORMATION





Note: APTech 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)

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 Hastelloy 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

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 and MP ports are 1/4 inch face seal male (1/4 inch face seal female are available).

| Options

VS = Vespel seat
P = Panel installation ring**

** On panel mount option, bonnet port is not threaded. Panel hole 1.56" diameter.