



SERIES AP 10PA

PNEUMATICALLY ACTUATED PRESSURE REGULATOR

Low Flow — High Pressure

- Actuation control pressure isolated from process gas by two seals
- Single stage
- Hastelloy® alloy C-22® or SS 316L VAR secondary remelt construction
- Cleaned, assembled and packaged for high purity semiconductor applications
- 15 µin. surface finish (10, 7 and 5 µin. opt)
- Vacuum to 3,500 psig (241 bar) inlet
- 100 psig outlet achieved with 80 psig control pressure or less
- Actuator 'fail safe' normally closed (NC)
- Installation and operating instructions available at www.aptech-online.com

Operating Parameters

Source pressure		vacuum to 3,500 psig (241 bar)
Delivery pressure	AP 10PA	7 to 150 psig (0.5 to 10 bar)
Proof pressure		5,000 psig (345 bar)
Burst pressure		10,000 psig (690 bar)
Control pressure		150 psig (10 bar) maximum

Other Parameters

Inlet/outlet connectors	1/4 or 3/8 inch face seal or tube weld
Control pressure port	1/8 inch NPT
Bonnet vent 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. (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	surface
Delivery pressure rise	0.25 psig per 100 psig source pressure drop
	HF 0.75 psig per 100 psig source pressure drop

Materials

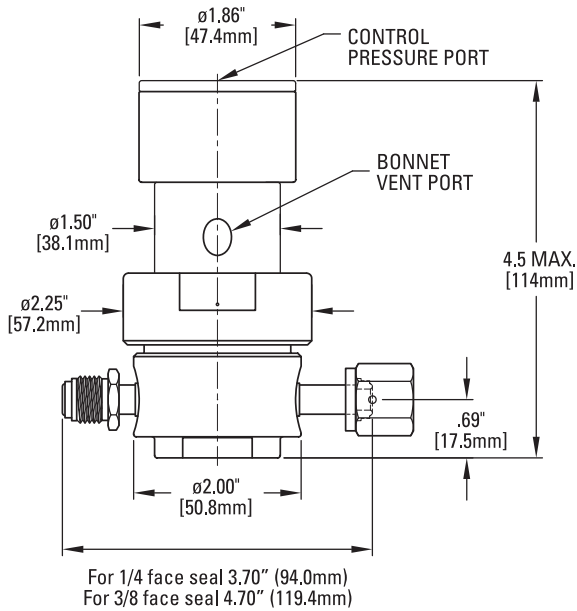
Type of Service	Series AP 10PA S Noncorrosive	Series AP 10PA SH Corrosive (SHP option)*	Series AP 10PA H Corrosive
Wetted Parts			
Body	SS 316L secondary remelt	SS 316L secondary remelt	Hastelloy alloy C-22
Poppet, nozzle, diaphragm	SS 316L	Hastelloy alloy C-22	Hastelloy alloy C-22
Finish	electropolished and passivated	electropolished and passivated	electropolished
Seat	PCTFE (Vespel® optional)	PCTFE	PCTFE

All specifications subject to change without notice.
*SHP option Hastelloy poppet and diaphragm only.

Hastelloy® C-22® Haynes Corporation Vespel® DuPont

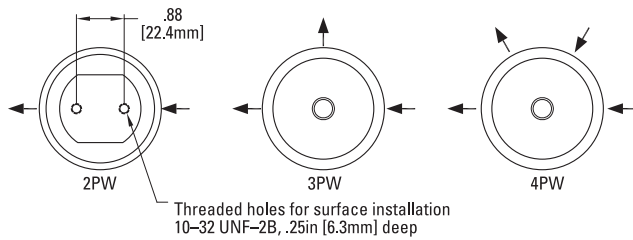
ULTRACLEAN TECHNOLOGY BACKED BY SERVICE AND SUPPORT

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 10PASM 4PW FV4 FV4 40 1

AP 10PA | Series

AP 10PA = 7-150 psig (.5 to 10 bar)

S | Material

S = Stainless steel (SS)
SH = SS/Hastelloy internals
SHP = SS/Hastelloy poppet diaphragm
H = Hastelloy alloy C-22

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 1 | 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
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).

| Options

VS = Vespel seat
HF = High flow**

** HF option does not achieve maximum rated outlet pressure at all inlet pressures.

