

SERIES AP 1200

TIED DIAPHRAGM REGULATOR

High Performance — High Flow – High Pressure



- Single stage
- Stainless steel 316L VAR secondary remelt construction
- Flow rates
 - standard to 800 slpm (28 scfm)
 - HF option to 1,000 slpm (35 scfm)
 - FC option to 1,500 slpm (52 scfm)
- Vacuum to 1,700 psig (117 bar) inlet
 - FC Option – vacuum to 300 psig (21 bar) inlet
 - HR Option – vacuum to 3,000 psig (207 bar) inlet
- Point of use and source cylinder applications
- Knob LOTO option (refer to AP KL data sheet)
- Installation and operating instructions available at www.aptech-online.com

Operating Parameters

Source pressure	AP 1200	vacuum to 1,700 psig (117 bar)
	AP 1200 HF	vacuum to 1,700 psig (117 bar)
	AP 1200 FC	vacuum to 300 psig (21 bar)
	AP 1200 HR	vacuum to 3,000 psig (207 bar)
Delivery pressure	AP 1202	1 to 30 psig (0.07 to 2 bar) (not available for FC or HR)
	AP 1206	1 to 60 psig (0.07 to 4 bar) (not available for FC or HR)
	AP 1210	2 to 100 psig (0.14 to 7 bar)
	AP 1215 [†]	5 to 150 psig (.34 to 10 bar)
	AP 1225	Preset to 250 psig (17 bar) at 800 psig inlet Custom inlet/outlet pressure settings available. Contact factory. (not available for FC)
Proof pressure		150% of operating pressures
Burst pressure		300% of operating pressures

[†]AP 1215 will not achieve full outlet pressure rating at all inlet pressures.

Other Parameters

Inlet/outlet connectors	1/4, 3/8, 1/2, 3/4 inch face seal or tube weld
Bonnet port	1/8 inch NPT
Flow coefficient (Cv) ^{***}	0.9 (HF = 1.1 and FC = 0.65)
Internal volume	1.07 in ³ (17.6 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
Leakage across seat	4 x 10 ⁻⁸ sccs He
Installation	surface or panel (optional)
Supply pressure effect	3.5 psig per 100 psig source pressure change
	HF & FC 4.2 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

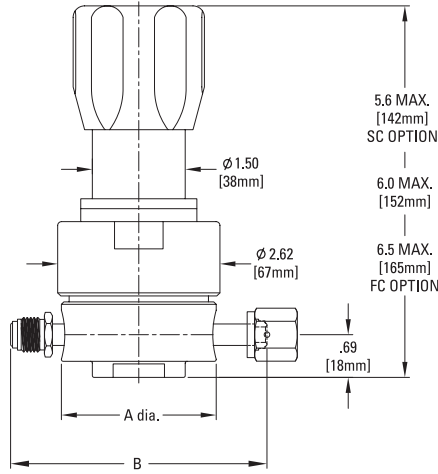
	Series AP 1200 S	Series AP 1200 SH
Type of Service	Noncorrosive	Corrosive (SHP ^{**} opt)
Wetted Parts		
Body	SS 316L secondary remelt	SS 316L secondary remelt
Poppet, nozzle	SS 316L	Ni-Cr-Mo alloy / UNS N06022
Diaphragm	Ni-Cr-Mo alloy / UNS N06022	Ni-Cr-Mo alloy / UNS N06022
Finish	electropolished and passivated	electropolished and passivated
Seat	PCTFE (Polyimide optional)	PCTFE

^{**}SHP option Ni-Cr-Mo alloy poppet and diaphragm only.

All specifications subject to change without notice.

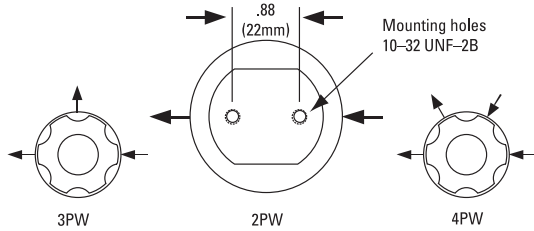
SERVICE AND SUPPORT BEYOND COMPARE

DIMENSIONAL INFORMATION



Face Seal	A	B
1/4" Male	2.00" (51 mm)	4.00" ±.02 (102 mm)
1/4" Female	2.00" (51 mm)	3.70" ±.02 (94 mm)
3/8"	2.50" (64 mm)	5.22" ±.03 (133 mm)
1/2"	2.50" (64 mm)	5.22" ±.03 (133 mm)
3/4"	2.50" (64 mm)	6.26" ±.04 (159 mm)

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 1210SM 3PW FV8 FV8 1 FC

AP 1210 | Series

AP 1202 = 1-30 psig (0.07 to 2 bar)
 AP 1206 = 2-60 psig (.14 to 4 bar)
 AP 1210 = 2-100 psig (.14 to 7 bar)
 AP 1215 = 5-150 psig (.34 to 10 bar)
 AP 1225 = 250 psig (17 bar) preset

S | Material

S = Stainless steel (SS)
 SH = SS/Ni-Cr-Mo alloy internals
 SHP = SS/Ni-Cr-Mo alloy poppet and diaphragm

M | Surface Finish Options

M = 10 μin. Ra max
 V = 7 μin. Ra max
 X = 5 μin. Ra max

3PW | Ports

2PW = 2 ports butt weld face seal
 3PW = 3 ports butt weld face seal
 4PW = 4 ports butt weld face seal

FV8 FV8 | Connections Inlet / Outlet

Tube weld stub available.
 "FC" option only available with 1/2" or 3/4" connectors.

*Caution: Verify mating fittings are of proper pressure rating for application.

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
 FV8 = 1/2 inch face seal female
 MV8 = 1/2 inch face seal male
 FV12 = 3/4 inch face seal female*
 MV12 = 3/4 inch face seal male*

1 | Gauges Source / Delivery

Standard gauge ports are 1/4 inch face seal male. (1/4 inch face seal female are available).

0 = No gauge 4 = 0-400 psig/bar
 V3 = 30-0-30 psig/bar 10 = 0-1000 psig/bar
 L = 30-0-60 psig/bar 40 = 0-4000 psig/bar
 1 = 30-0-100 psig/bar H = 30-0-160 psig/bar
 2 = 0-200 psig/bar

FC | Options

**HR, HF and FC options are only available separately. These options may not be combined.

***SC option not available with FC or HR. KL should be ordered with SC option.

HR = High Inlet Pressure**
 HF = High Flow**
 FC = Force Compensation**
 P = Panel installation ring
 VS = Polyimide seat
 SC = Short, single piece bonnet***
 KL = Knob LOTO***

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.

