

SERIES AP 1400T

TIED DIAPHRAGM REGULATOR

Intermediate to high flow applications



- Single stage
- Stainless steel 316L VAR secondary remelt construction
- Absolute sub-atmospheric option, flow rate to 6 slpm
- Cylinder or point of use specialty and bulk gases
- Flow rates to 600 slpm (21 scfm)
- Vacuum to 2,300 psig (158 bar) inlet
- Designed and manufactured exclusively for UHP semiconductor applications

Operating Parameters

Source pressure	AP 1400T	vacuum to 2,300 psig (159 bar)
	AP 1400TA	vacuum to 300 psig (21 bar)
Delivery pressure	AP 1402TA	100 mm Hg absolute to 30 psig (2 bar)
	AP 1402T	1 to 30 psig (0.07 to 2 bar)
	AP 1406T	1 to 60 psig (0.07 to 4 bar)
	AP 1410T	2 to 100 psig (0.14 to 7 bar)
Proof pressure		4,000 psig (276 bar)
Burst pressure		8,000 psig (552 bar)

Other Parameters

Inlet/outlet connectors	1/4, 3/8 or 1/2 inch face seal or tube weld
Bonnet port	1/8 inch NPT
Flow coefficient (Cv)	0.45
Internal volume	1.06 in ³ (17.4 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 or panel (optional)
Delivery pressure rise	1.6 psig per 100 psig source pressure drop

Materials

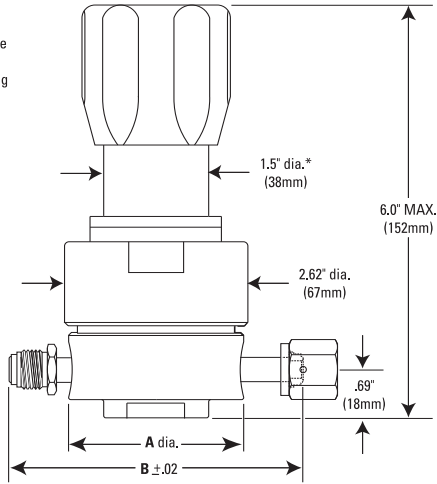
	Series AP 1400T S Noncorrosive	Series AP 1400T SH Corrosive
Type of Service		
Wetted Parts		
Body	SS 316L secondary remelt	SS 316L secondary remelt
Poppet and diaphragm	Hastelloy® alloy C-22®	Hastelloy C-22
Nozzle	SS 316L	Hastelloy C-22
Finish	electropolished and passivated	electropolished and passivated
Seat	PCTFE (Vespe® optional)	PCTFE

All specifications subject to change without notice.

Hastelloy® C-22® Haynes Corporation

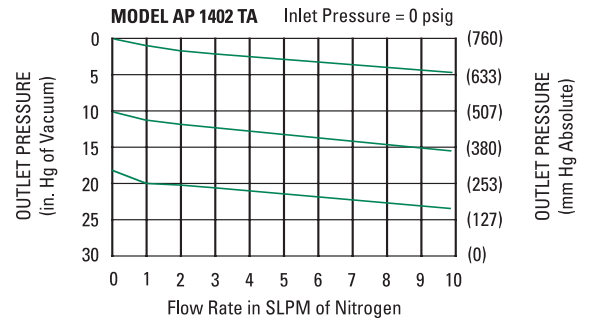
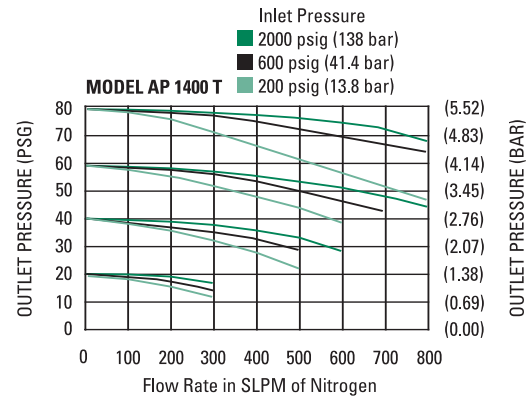
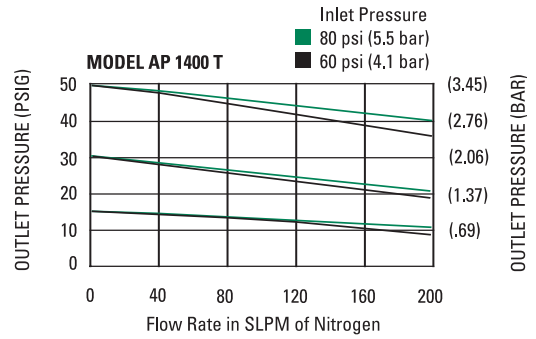
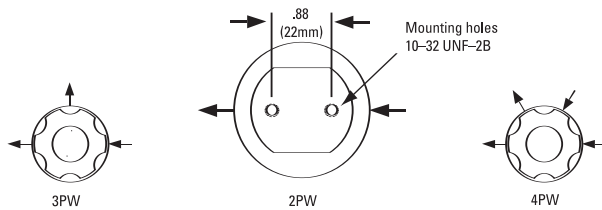
Vespe® DuPont

* 1.56" dia. hole required for panel mounting



Face Seal	A	B
1/4" Male	2.00" (51 mm)	4.00" (102 mm)
1/4" Female	2.00" (51 mm)	3.70" (94 mm)
3/8"	2.50" (64 mm)	5.22" (133 mm)
1/2"	2.50" (64 mm)	5.22" (133 mm)

All dimensions in inches (mm). Metric dimensions are for reference only.



Sample Order Number

AP 1402T SMA 3PW FV4 FV4 V3

AP 1402T | Series

AP 1402T = 1-30 psig (.07 to 2 bar)
 AP 1406T = 1-60 psig (.07 to 4 bar)
 AP 1410T = 2-100 psig (.14 to 7 bar)

S | Material

S = Stainless steel (SS)
 SH = SS/Hastelloy internals
 SHP = SS/Hastelloy poppet and diaphragm

M | Surface Finish Options

M = 10 μ in. Ra max
 V = 7 μ in. Ra max
 X = 5 μ in. Ra max

A | Range Options

A = 100 mm Hg absolute to 30 psig (2 bar)
 (AP 1402T option only)

3PW | Ports

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

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
 FV8 = 1/2 inch face seal female
 MV8 = 1/2 inch face seal male

Tube weld stub available

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
 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 face seal female are available).

Options

P = Panel installation ring**
 VS = Vespel seat

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