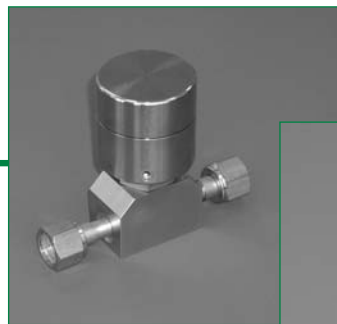


# SERIES AP 37, 38 & 39

## 1/2 INCH DIAPHRAGM VALVE

Springless – manual and pneumatic (NC & NO)



- 316L VAR SS secondary remelt construction
- Operating pressure vacuum to 250 psig (17 bar)
- Machined from bar stock
- Multi-port and monoblock available (refer to page 4)
- LOTO AP 3900
- Flow capacity 2.8 C<sub>v</sub>
- Surface finish  
15 Ra max/10 Ra avg  
(10, 7 & 5 Ra max options)
- Indicating switch –  
AP 3700 and AP 3708  
option
- Installation and operating instructions available at [www.aptech-online.com](http://www.aptech-online.com) in the Tech Briefs section

### Manual valves

PSIG / BAR  
250 / 17

<b>AP 3800</b>	●
– Round knob	
– Open/closed status indicating window	
<b>AP 3900</b>	●
– Round knob	
– Open/closed status indicating window	
– Pull, then turn to open – operational or safety feature	
– Lock out/tag out (LOTO) – integral standard feature	

### Pneumatic valve, normally closed (NC)

PSIG / BAR  
250 / 17

<b>AP 3700</b>	●
– Switch option for remote monitoring	

### Pneumatic valve, normally open (NO)

PSIG / BAR  
250 / 17

<b>AP 3708</b>	●
– Switch option for remote monitoring	

All specifications subject to change without notice.

# HIGH PURITY ~ HIGH VALUE

## Operating Parameters — all valves

Inlet pressure	vacuum to 250 psig (17 bar)
Outlet pressure	vacuum to inlet pressure
Proof pressure	1.5 times operating pressure
Burst pressure	3 times operating pressure

## Other Parameters — all valves

Inlet /outlet connectors	3/8, 1/2 or 3/4 inch face seal or tube weld
Flow coefficient (Cv)	2.8, Xr = 1.0
Internal volume	0.76 in <sup>3</sup> (12.52 cm <sup>3</sup> )
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 <sup>-10</sup> sccs
Outboard leakage	2 x 10 <sup>-9</sup> sccs He
Leakage across seat	4 x 10 <sup>-8</sup> sccs He

## Operating Parameters — pneumatic valves

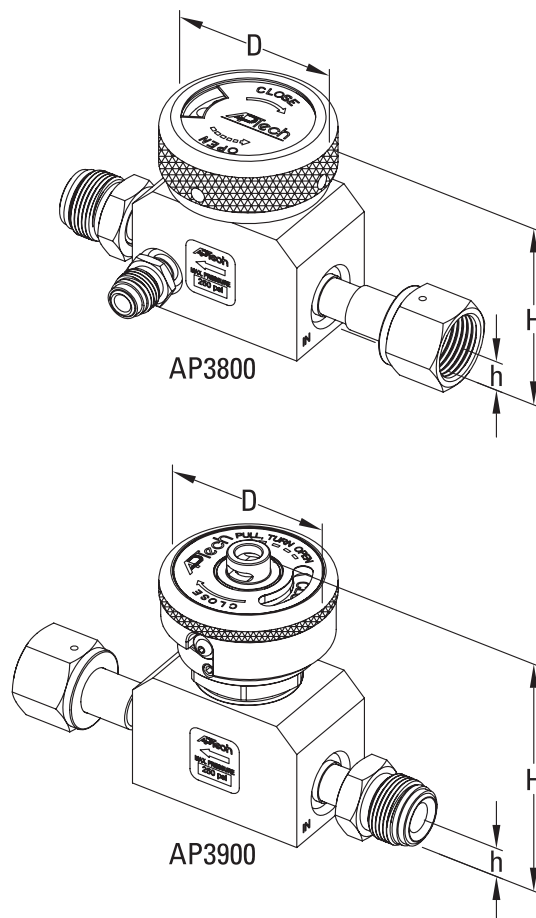
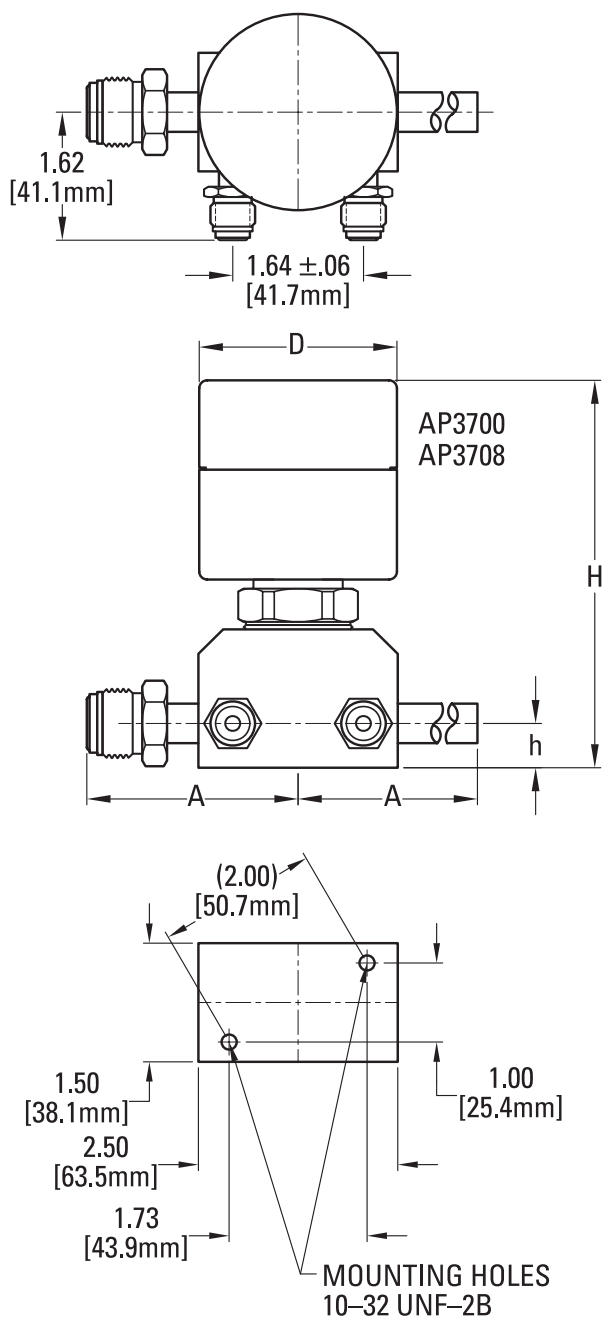
Status	AP 3700 AP 3708	normally closed (NC) normally open (NO)
Actuation port		#10–32 thread, side port
Actuation pressure		80 to 100 psig (5.5 to 7 bar)

## Materials — wetted parts, all valves

Body	SS 316L secondary remelt
Finish	electropolished and passivated
Diaphragm	stainless steel 316L
Seat	PCTFE (Vespel® optional)

All specifications subject to change without notice

Vespel® DuPont



- Metric dimensions are for reference only.
- Height of the valve (H) is an approximate value.
- All specifications subject to change without notice.
- AP3800 valve is shown in open position, AP3900 valve is shown in closed position.

VALVE	D		H		h	
	inch	mm	inch	mm	inch	mm
AP3700	ø2.48	63.0	5.0	127	.56	14.2
AP3708	ø2.48	63.0	5.0	127	.56	14.2
AP3800	ø2.25	57.2	2.85	72	.56	14.2
AP3900	ø2.25	57.2	3.64	92	.56	14.2

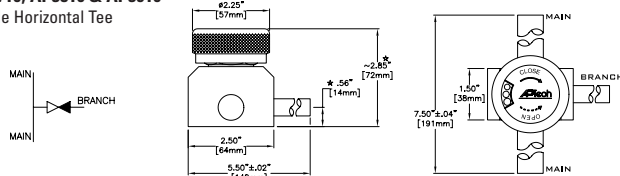
CONNECTION	A	
	inch [±.02]	mm
FV8, MV8	2.65	67.3
TW6, TW8, TW12	4.25	108
FV12, MV12	3.20	81.3

# ULTRACLEAN TECHNOLOGY BACKED BY SERVICE AND SUPPORT

## MONOBLOCK CONFIGURATIONS

### AP3710, AP3810 & AP3910

#### Single Horizontal Tee

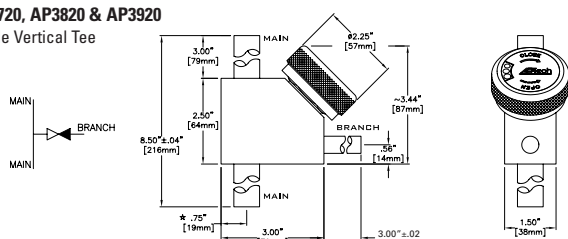


AP3810 shown

\* VARIES FOR DIFFERENT SIZES OF MAIN

### AP3720, AP3820 & AP3920

#### Single Vertical Tee

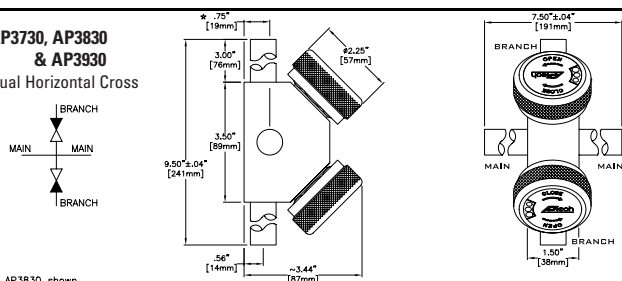


AP3820 shown

\* VARIES FOR DIFFERENT SIZES OF MAIN

### AP3730, AP3830 & AP3930

#### Dual Horizontal Cross

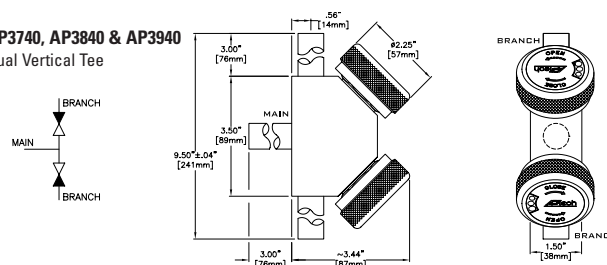


AP3830 shown

\* VARIES FOR DIFFERENT SIZES OF MAIN

### AP3740, AP3840 & AP3940

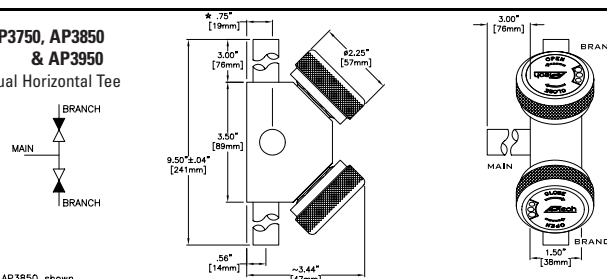
#### Dual Vertical Tee



AP3840 shown

### AP3750, AP3850 & AP3950

#### Dual Horizontal Tee



AP3850 shown

\* VARIES FOR DIFFERENT SIZES OF MAIN

Standard monoblock configurations.  
Custom models available upon request.

**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 3700SM TW8 TW8 0B C

#### AP 37 | Series

AP 37 = Air actuated  
AP 38 = Manual  
AP 39 = Manual, LOTO

#### Monoblock Option

#### 00 | Choose One

#### Status (2 port only)

10 = Single horizontal tee  
20 = Single vertical tee  
30 = Dual horizontal cross  
40 = Dual vertical tee  
50 = Dual horizontal tee

#### S | Material

S = Stainless steel (SS)

#### M | Surface Finish Options

M = 10  $\mu$ in. Ra max  
V = 7  $\mu$ in. Ra max  
X = 5  $\mu$ in. Ra max

#### TW8 TW8 | Connections Inlet / Outlet (main / branch)

TW6 = 3/8 inch tube stub weld  
FV8 = 1/2 inch face seal female  
MV8 = 1/2 inch face seal male  
TW8 = 1/2 inch tube stub weld  
FV12 = 3/4 inch face seal female  
MV12 = 3/4 inch face seal male  
TW12 = 3/4 inch tube stub weld  
TW16\* = 1 inch tube stub weld  
TW24\* = 1 1/2 inch tube stub weld

NOTE: Further connections are available.  
Please consult factory.

#### 0B | Purge Port Inlet / Outlet (main / branch)

M = Inlet purge port\*\*  
B = Outlet purge port  
0 = No purge port

#### C | Options

VS = Vespel Seat  
ISC = Indicator Switch, NC (3700 & 3708 only)\*\*\*  
ISO = Indicator Switch, NO (3700 & 3708 only)\*\*\*  
C = Capped Purge Port

\*TW16 and TW24 available on main only with monoblock option. \*\*Not available in monoblock. \*\*\*Refer to operating manual for further switch information.