

SERIES AP 3600 & AP 4600

MANUAL 1/4 & 3/8 INCH DIAPHRAGM VALVE

Multi Turn Handle



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- Stainless steel 316L VAR secondary remelt or Hastelloy® alloy C-22® construction
- 15 µin. surface finish (10, 7 and 5 µin. optional)
- Metal to metal seal to atmosphere
- Replaceable PCTFE seat (Vespel® optional)
- Vacuum to 3,000 psig (207 bar) AP 3600
- Vacuum to 250 psig (17 bar) AP 4600
- Cleaned, assembled and packaged for high purity semiconductor applications
- Internal stop prevents overstressing seat

Operating Parameters—all valves

Inlet pressure	AP 3600	vacuum to 3,000 psig (207 bar)
	AP 4600	vacuum to 250 psig (17 bar)
Outlet pressure		vacuum to inlet pressure
Proof pressure		4,000 psig (276 bar)
Burst pressure		8,000 psig (552 bar)

Other Parameters—all valves

Inlet/outlet connectors		1/4 or 3/8 inch face seal or tube weld
Flow coefficient (Cv)	AP 3600	0.29, X _T = 0.6
	AP 4600	0.5, X _T = 0.6
Internal volume		0.06 in ³ (1.07 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 250 psig
Leakage across seat		4 x 10 ⁻⁸ sccs He at 250 psig inlet pressure

Materials

Type of Service	Series AP 3600 & 4600 S Noncorrosive	Series AP 3600 & 4600 H Corrosive
Wetted Parts		
Body	stainless steel 316L secondary remelt	Hastelloy alloy C-22
Finish	electropolished and passivated	electropolished
Diaphragm	Elgiloy®	Elgiloy
Seat	PCTFE (Vespel® optional)	PCTFE

All specifications subject to change without notice.

Hastelloy® C-22® Haynes Corporation Vespel® DuPont Elgiloy® Elgiloy Corporation

ENGINEERING DATA — SERIES AP 3600 & AP 4600 MANUAL DIAPHRAGM VALVE

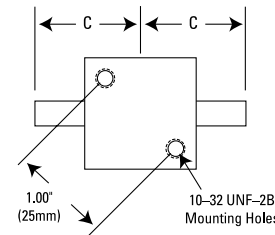
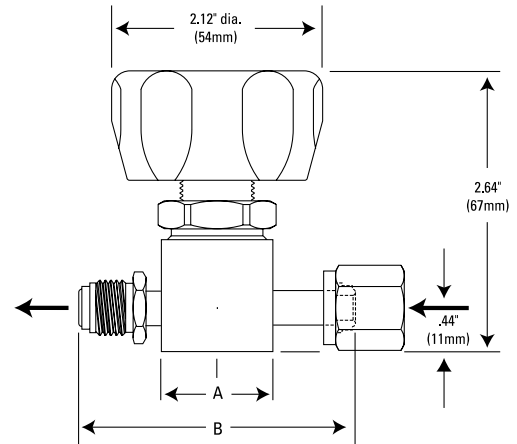
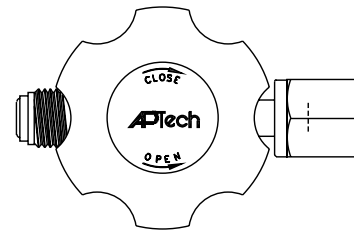
UNCOMPROMISING QUALITY, PERFORMANCE AND RELIABILITY

PLEASE NOTE

Hastelloy design may vary. Please consult factory for current specifications.

DIMENSIONAL INFORMATION

MATERIAL	CONNECTION	A		B		C	
		in.	mm	in. [±.01]	mm	in. [±.01]	mm
S	FV4, MV4	1.12 sq.	28	1.39	35	–	–
	TW4	1.12 sq.	28	–	–	1.06	27
	FV6, MV6	1.12 sq.	28	1.93	49	–	–
	TW6	1.12 sq.	28	–	–	1.33	34
H	FV4, MV4	1.25 dia.	32	1.45	37	–	–
	TW4	1.25 dia.	32	–	–	1.08	27
	FV6, MV6	1.25 dia.	32	1.93	49	–	–
	TW6	1.25 dia.	32	–	–	1.33	34



Please refer to Technical Bulletin 203 for valve porting configurations.

PORTING CONFIGURATIONS

All dimensions in inches (mm).

ORDERING INFORMATION

Sample Order Number AP 3600SM 2PW MV4 MV4

AP 3600 | Series

AP 3600
AP 4600

S | Material

S = 316L stainless steel
H = Hastelloy alloy C-22

M | Surface Finish Options

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

2PW | Ports

2PW = 2 ports butt weld
3PW = 3 ports butt weld
4PW = 4 ports butt weld
5PW = 5 ports butt weld
(Refer to valve porting guide for selection)

MV4 MV4 | Connections Inlet / Outlet

FV4 = 1/4 inch face seal female
MV4 = 1/4 inch face seal male
TW4 = 1/4 inch tube stub weld
FV6 = 3/8 inch face seal female
MV6 = 3/8 inch face seal male
TW6 = 3/8 inch tube stub weld

Options

1.75 = 1.75" face to face TW4
VS = Vespel seat
P = Panel mount*

* Panel hole 0.78" diameter