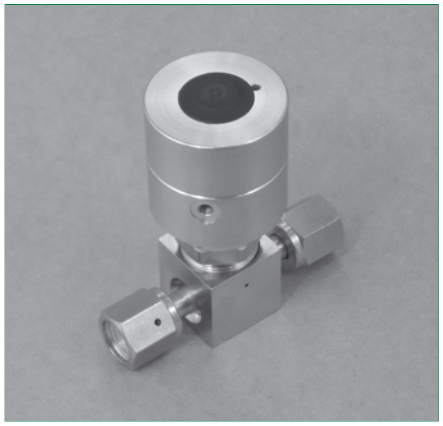
APTech
ADVANCED PRESSURE TECHNOLOGY

SERIES AP 3571 & 4571

1/4 & 3/8 INCH SPRINGLESS DIAPHRAGM VALVES

Dual mode – metered or full open



- Soft start valve to minimize vacuum chamber pressurization turbulence
- Stainless steel 316L VAR secondary remelt construction
- Metal to metal seal to atmosphere
- Metered flow adjustable
  AP 3571 – 10 to 200 slpm
  AP 4571 – 10 to 350 slpm
  at 80 psig of N_2
- Pneumatically actuated normally closed
- Two separate actuation ports – metered and full open
- Installation and operating instructions available at www.aptech-online.com in the Tech Briefs section

Operating Parameters – all valves

Inlet pressure	vacuum to 125 psig (8.6 bar)
Outlet pressure	vacuum to inlet pressure
Proof pressure	200 psig (13.8 bar)
Burst pressure	1,000 psig (68.9 bar)
Actuation pressure	70 to 110 psig (4.8 to 7.6 bar)

Other Parameters – all valves

Status	normally closed
Inlet /outlet connectors	1/4 or 3/8 inch face seal or tube weld
Actuation ports (2 ea.) Port 1 = metered Port 2 = full open	M5 thread, side ports, 180° apart, oriented in-line with mounting holes
Flow coefficient AP 3571 AP 4571	0.29, X_T = 0.6 0.5, X_T = 0.6
Internal volume	0.06 in^3 (1.07 cm^3)
Operating temperature	32° to 125°F (0° to 51°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^{-10} sccs
Outboard leakage	2 x 10^{-9} sccs He at 125 psig
Leakage across seat	4 x 10^{-8} sccs He at 125 psig inlet pressure

Metered Flow Range Tolerance at 80 psig N_2 inlet, 0 psig outlet

10 to 20 slpm	+/- 6 slpm
21 to 50 slpm	+/- 10 slpm
51 to 100 slpm	+/- 15 slpm
101 to 200 slpm	+/- 20 slpm
201 to 350 slpm (AP 4571 only)	+/- 25 slpm

Materials

	Series AP 3571 and 4571
Wetted Parts	
Body	SS 316L secondary remelt
Finish	electropolished and passivated
Diaphragm	Elgiloy®
Seat	PCTFE

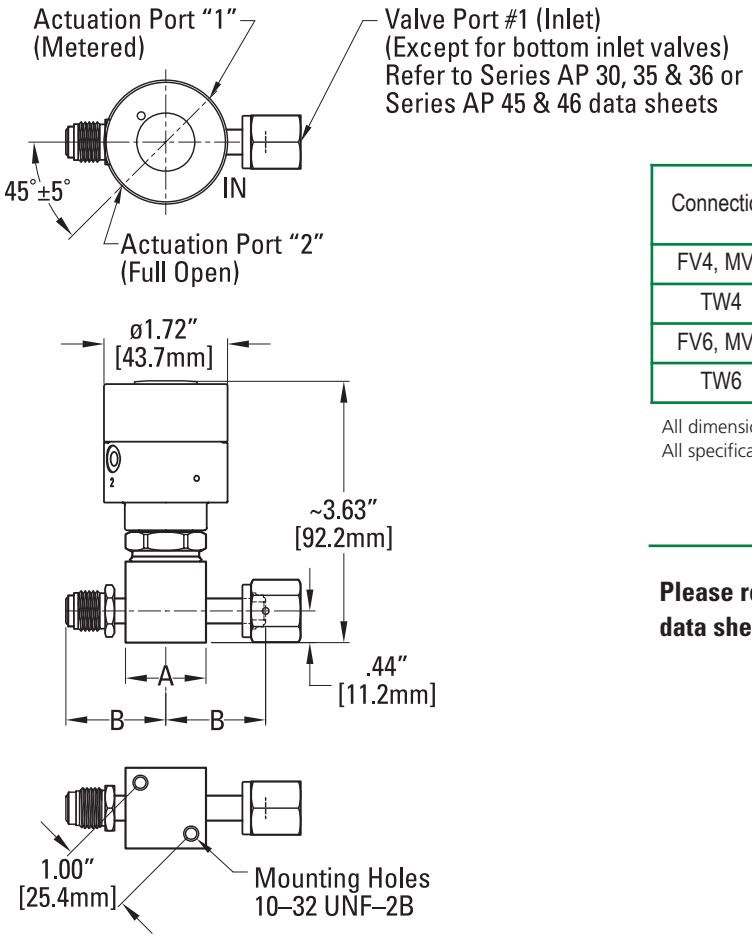
All specifications subject to change without notice.

Elgiloy® Elgiloy Corporation

ENGINEERING DATA — SERIES AP 3571 AND 4571 SPRINGLESS DIAPHRAGM VALVES

BI-FLOW VALVE – METERED OR FULL OPEN CONTROL

DIMENSIONAL INFORMATION



Connection	A		B	
	inch	mm	inch [±.01]	mm
FV4, MV4	1.12 SQ	28.4	1.390	35.3
TW4	1.12 SQ	28.4	1.060	26.9
FV6, MV6	1.12 SQ	28.4	1.930	49.0
TW6	1.12 SQ	28.4	1.325	33.7

All dimensions in inches (mm). Metric dimensions are for reference only.
All specifications subject to change without notice.

Please refer to Series AP 30, 35 & 36 or Series AP 45 & 46 data sheets for porting configuration options.

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 3571SM 2PW MV4 MV4 M050**

AP 3571 | Series
AP 3571
AP 4571

S | Material
S = Stainless steel (SS)

M | Surface Finish Options
M = 10 µin. Ra max
V = 7 µin. Ra max
X = 5 µin. Ra max

2PW | Ports
2PW = 2 ports
3PW = 3 ports
4PW = 4 ports
5PW = 5 ports

Refer to Series AP 30, 35 & 36 or Series AP 45 & 46 data sheets for selection.

Please refer to technical bulletin 206 for surface mount (IGS) options.

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 inch face to face TW4 option

M050 | Metered Flow
MXXX = Metered adjusted flow in slpm at 80 psig N_2

Note: Replace XXX with flow rate using 3 digits, example 50 slpm = M050