

ALD26 SERIES DIAPHRAGM VALVES

GENTEC® ALD26 Series Diaphragm Valves are designed for atomic layer deposition processes in the semiconductor industry.



SLVV-ALD26PS-11W2-S1



SLVV-ALD26TPS-11W2-S1

Features

- Suitable for ultra high purity applications with 316L VAR or VIM VAR stainless body
- High speed actuation $\leq 5\text{ms}$
- Pre-set flow adjusting mechanism ensures precise and consistent Cv from valve to valve
- Optional solenoid pilot valve for high speed actuation control
- Optional optical position sensor or amplifier
- 100% Helium-leak tested
- Ultrahigh cycle life

Materials

- Body: 316L VAR, 316L VIM VAR
- Seat: PFA
- Diaphragm: Co-Ni Super Alloy

Specifications

- Flow capacity*: $C_v=0.27$
- * Customizable CV
- Maximum leak Rate:
Inboard leakage: $1 \times 10^{-9} \text{ atm.cc/sec He}$
Across seat leakage: $1 \times 10^{-9} \text{ atm.cc/sec He}$

Operating Conditions

- Operating Pressure: Vacuum ~ 150 psi
- Operating Temperature (Valve Body):
Standard type ALD26: $0^\circ\text{C} \sim 120^\circ\text{C}$ ($32^\circ\text{F} \sim 248^\circ\text{F}$)
With Thermal Bridge ALD26T: $0^\circ\text{C} \sim 200^\circ\text{C}$ ($32^\circ\text{F} \sim 392^\circ\text{F}$)

Actuator Specifications

- Operating pressure: Min 60 psi
- Working Temperature: $\leq 120^\circ\text{C}$
- Inlet Connection: M5 (F)
- Normally: closed

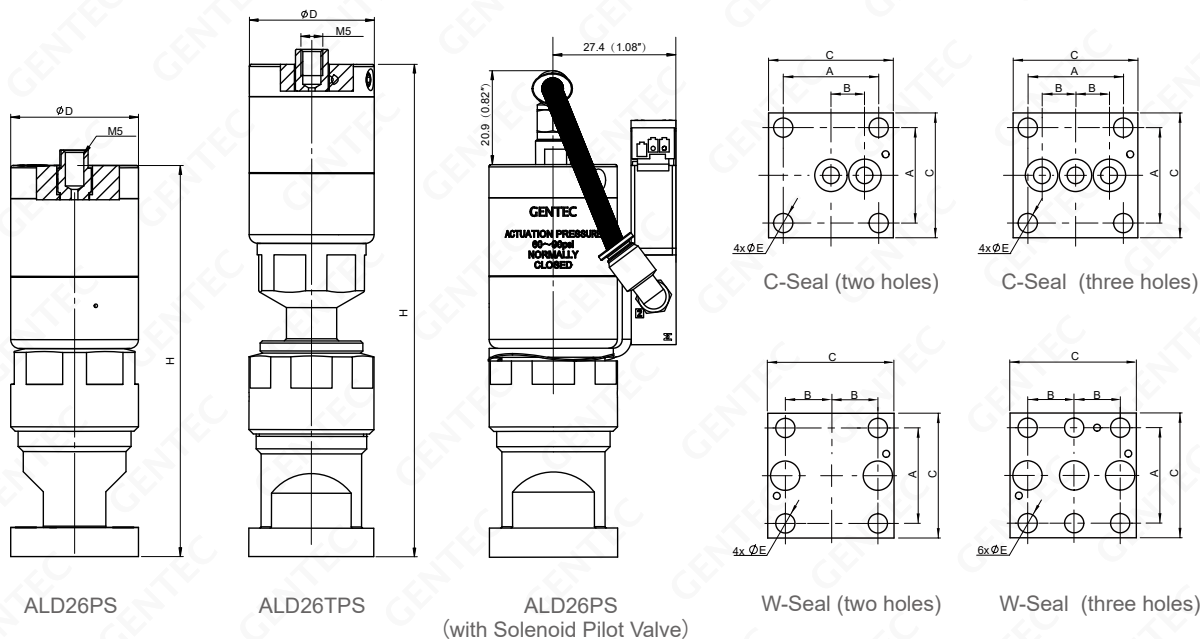
Wetted Surface Roughness

- Ra: 5 μm
- Wetted Components processed according to GENTEC Ultra High Purity Process Specification (GC-S1)

Internal Volume

- 1.6 cc

Dimensions



Series	Dimensions mm(in.)					
	A	B	C	D	E	H
ALD26PS (C-Seal)	21.8 (0.86")	7.75 (0.31")	28.6 (1.13")	28.6 (1.13")	4.4 (0.17")	87.5 (3.44")
ALD26TPS (C-Seal)	21.8 (0.86")	7.75 (0.31")	28.6 (1.13")	28.6 (1.13")	4.4 (0.17")	112.7 (4.44")
ALD26PS (W-Seal)	21.8 (0.86")	7.75 (0.31")	28.6 (1.13")	28.6 (1.13")	4.4 (0.17")	83.7 (3.30")
ALD26TPS (W-Seal)	21.8 (0.86")	7.75 (0.31")	28.6 (1.13")	28.6 (1.13")	4.4 (0.17")	108.9 (4.29")

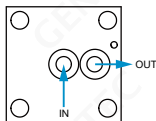
Dimensions: in (mm)

Amplifier Technical Information		
Model	PE23VP-Y2M	
Operating temperature	When in motion: When 1-2 units are connected, -25°C ~ 55°C (-13°F ~ 131°F); When 3-10 units are connected, -25°C ~ 50°C (-13°F ~ 122°F); When 11-16 units are connected, -25°C ~ 45°C (-13°F ~ 113°F); When saving: -30°C ~ 70°C (-22°F ~ 158°F) (No ice or condensation)	
Wiring method PNP-NO/NC		
Power supply voltage	DC12-24V (±10%), Fluctuation (p-p) below 10%	

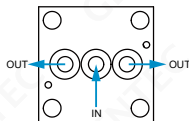
Solenoid Pilot Valve Technical Information		
Component	MAC Valve 34C-ABA	
Solenoid pilot valve	24 V · 4 W Temperature: -18°C ~ 50°C (-0.4°F ~ 122°F) Porting: M5 × 0.8-6H thread, compatible with 10-32 screws	
Tubing	Material: polyurethane	
Bracket	Material: 316 stainless steel	

Optical Position Sensor Technical Information		
Model	DM-32GI	
Type	Diffuse reflection type	
Operating temperature	-40°C ~ 70°C (-40°F ~ 158°F)	
Optical fiber length	2000mm (Can be freely cut)	

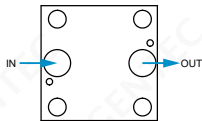
Inlet and Outlet



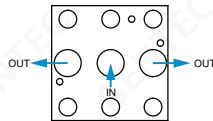
C-Seal (two holes)



C-Seal (three holes)



W-Seal (two holes)



W-Seal (three holes)

Ordering Information

EX: SLVV	- ALD26	T	P	S	- 11W2	- IS	- S1
Body	Series Number	Temperature	Valve Type	Working Pressure	Connection Type	Options	Process Standard
SLVV: 316L VIM VAR SLV: 316L VAR	ALD26	None: standard type T: with thermal bridge	P: Pneumatic	S: 150 psi	11C2: 1.125" C-Seal, two holes 11C3: 1.125" C-Seal, three holes 11W2: 1.125" W-Seal, two holes 11W3: 1.125" W-Seal, three holes Other connection styles are available	IS: with optical position sensor and amplifier (Optical position sensors need to be used in conjunction with amplifiers.) IV: with solenoid pilot valve	S1: Ultra-high purity process