

Features

- Developed in pursuit of minimizing the weight and the footprint of valve while maintaining the same performance with our legacy diaphragm valve series.
- For ultra high purity application, efficient purging design and minimal particle generation
- Optimal design for long cycle life based on value engineering (for XD12)
Diaphragm: Cobalt alloy material for strength and corrosion resistance

Specifications

Size	XD4 (1/4")	XD6 (3/8") XD8 (1/2")	XD12 (3/4")	Grade	STD	EP	SEP
Cv	0.27	0.7	1.7	Body Material	SUS316L		SUS316LE (Double melt material)
Maximum Operation Pressure	142psig(0.98 MPa(G))			Surface Roughness	$\leq R_z 3.2 \mu m$ $\leq R_a 0.8 \mu m/ 20 \mu in$		$\leq R_z 0.7 \mu m$ $\leq R_a 0.16 \mu m/ 5 \mu in$
Wetted Area Volume	0.083in ³ (1.36cm ³)	0.447in ³ (7.3cm ³)	2.11in ³ (34.6cm ³)	Polish	Mechanical Polished	Electro Polished	
Fluid Temperature	PCTFE -10℃~80℃			Cleaning	Degreasing + Precision Cleaning		
	PI / PFA -10℃~150℃			Packaging	Single bagged Package	Double bagged Package	
Atmospheric Temperature	-10℃~60℃						
Leak Rates	Across the Seat He Leak Test Rates $\leq 1 \times 10^{-9}$ sccs ($\leq 1 \times 10^{-10}$ Pa · m ³ /sec)			Body	SUS316L , SUS316LE		
	Inboard He Leak Test Rates $\leq 1 \times 10^{-9}$ sccs ($\leq 1 \times 10^{-10}$ Pa · m ³ /sec)			Seat	PCTFE, PI, PFA		
Actuation Pressure(Pneumatic)	58-102psig(0.4-0.7 MPa(G))			Diaphragm	Cobalt alloy		
Cycle Life *1	Manual Valve	100,000 cycles	30,000 cycles				
	Pneumatic Valve	4 million cycles	300,000 cycles				

*1 Test Condition / Seat material : PCTFE Gas : N₂ Pressure : 142psig (0.98 MPa(G))

Product Code Table

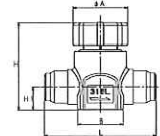
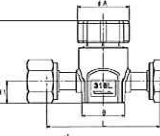
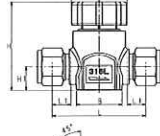
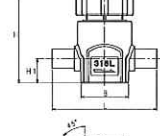
Model	Size	Operation	Valve Shape	Connection	Seat Material	Handle Color	Grade + Body Material
XD	4	C	S	S	C		EP-316L
XD: XD Type Diaphragm Valve Size: 4: 1/4", 6: 3/8", 8: 1/2", 12: 3/4" M: Manual Valve, C: N.C. S: Straight, A: Angle, L: L-shape, B: Branch V: CVC male, VF: CVC female, S: Compression, W: Butt weld C: PCTFE, A: PFA, P: PI Not Shown: Blue (Standard), RD: Red, GR: Green, SL: Silver, BK: Black, YE: Yellow, BR: Brown, WH: White STD-316L: Mechanical Polished+SUS316L, EP-316L: Electro Polished+316L, SEP-316L: Electro Polished+316LE*							

※SEP-316L is available for XD4, XD6 and XD8

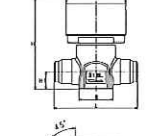
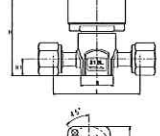
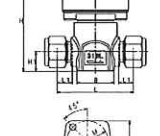
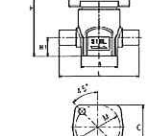
Dimensions

Unit : inch(mm)

Manual

Model	Model	Connection	L	L1	H	H1	A	B	C	M	M1
	XD4MS-V□	1/4"CVC Male	2.24 (57.0)	—	1.93 (49.0)	0.43 (11.0)	1.50 (38.0)	1.10 (28.0)	0.98 (25.0)	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	XD6MS-V□	1/2"CVC Male	3.03 (77.0)	—	2.38 (60.5)	0.63 (16.0)	1.50 (38.0)	1.24 (31.5)	1.10 (28.0)	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD8MS-V□	1/2"CVC Male	3.03 (77.0)	—	2.38 (60.5)	0.63 (16.0)	1.50 (38.0)	1.24 (31.5)	1.10 (28.0)	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD12MS-V□	3/4"CVC Male	4.21 (107.0)	—	3.27 (83.0)	0.91 (23.0)	1.50 (38.0)	1.89 (48.0)	1.81 (46.0)	1.38 (35.0)	2-M5 Depth 0.31 (8.0)
	XD4MS-VF□	1/4"CVC Female	2.78 (70.6)	—	1.93 (49.0)	0.43 (11.0)	1.50 (38.0)	1.10 (28.0)	0.98 (25.0)	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	XD6MS-VF□	1/2"CVC Female	3.27 (83.0)	—	2.38 (60.5)	0.63 (16.0)	1.50 (38.0)	1.24 (31.5)	1.10 (28.0)	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD8MS-VF□	1/2"CVC Female	3.27 (83.0)	—	2.38 (60.5)	0.63 (16.0)	1.50 (38.0)	1.24 (31.5)	1.10 (28.0)	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD12MS-VF□	3/4"CVC Female	7.06 (179.2)	—	3.27 (83.0)	0.91 (23.0)	1.50 (38.0)	1.89 (48.0)	1.81 (46.0)	1.38 (35.0)	2-M5 Depth 0.31 (8.0)
	XD4MS-S□	1/4"Compression	1.89 (48.0)	0.31 (7.9)	1.93 (49.0)	0.43 (11.0)	1.50 (38.0)	1.10 (28.0)	0.98 (25.0)	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	XD6MS-S□	1/2"Compression	2.52 (64.0)	0.50 (12.7)	2.38 (60.5)	0.63 (16.0)	1.50 (38.0)	1.24 (31.5)	1.10 (28.0)	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD8MS-S□	1/2"Compression	2.52 (64.0)	0.50 (12.7)	2.38 (60.5)	0.63 (16.0)	1.50 (38.0)	1.24 (31.5)	1.10 (28.0)	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD12MS-S□	3/4"Compression	4.96 (126.0)	0.56 (14.3)	3.27 (83.0)	0.91 (23.0)	1.50 (38.0)	1.89 (48.0)	1.81 (46.0)	1.38 (35.0)	2-M5 Depth 0.31 (8.0)
	XD4MS-W□	1/4"Butt Weld	2.13 (54.0)	—	1.93 (49.0)	0.43 (11.0)	1.50 (38.0)	1.10 (28.0)	0.98 (25.0)	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	XD6MS-W□	1/2"Butt Weld	2.72 (69.0)	—	2.38 (60.5)	0.63 (16.0)	1.50 (38.0)	1.24 (31.5)	1.10 (28.0)	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD8MS-W□	1/2"Butt Weld	2.72 (69.0)	—	2.38 (60.5)	0.63 (16.0)	1.50 (38.0)	1.24 (31.5)	1.10 (28.0)	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD12MS-W□	3/4"Butt Weld	6.14 (156.0)	—	3.27 (83.0)	0.91 (23.0)	1.50 (38.0)	1.89 (48.0)	1.81 (46.0)	1.38 (35.0)	2-M5 Depth 0.31 (8.0)

Pneumatic

Model	Model	Connection	L	L1	H	H1	A	B	C	P	M	M1
	XD4CS-V□	1/4"CVC Male	2.24 (57.0)	—	2.54 (64.5)	0.43 (11.0)	1.56 (39.7)	1.10 (28.0)	0.98 (25.0)	Rc1/8	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	XD6CS-V□	1/2"CVC Male	3.03 (77.0)	—	3.31 (84.0)	0.63 (16.0)	2.17 (55.0)	1.24 (31.5)	1.10 (28.0)	Rc1/8	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD8CS-V□	1/2"CVC Male	3.03 (77.0)	—	3.31 (84.0)	0.63 (16.0)	2.17 (55.0)	1.24 (31.5)	1.10 (28.0)	Rc1/8	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD12CS-V□	3/4"CVC Male	4.21 (107.0)	—	5.79 (147.0)	0.91 (23.0)	2.17 (55.0)	1.89 (48.0)	1.81 (46.0)	Rc1/8	1.38 (35.0)	2-M5 Depth 0.31 (8.0)
	XD4CS-VF□	1/4"CVC Female	2.78 (70.6)	—	2.54 (64.5)	0.43 (11.0)	1.56 (39.7)	1.10 (28.0)	0.98 (25.0)	Rc1/8	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	XD6CS-VF□	1/2"CVC Female	3.27 (83.0)	—	3.31 (84.0)	0.63 (16.0)	2.17 (55.0)	1.24 (31.5)	1.10 (28.0)	Rc1/8	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD8CS-VF□	1/2"CVC Female	3.27 (83.0)	—	3.31 (84.0)	0.63 (16.0)	2.17 (55.0)	1.24 (31.5)	1.10 (28.0)	Rc1/8	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD12CS-VF□	3/4"CVC Female	7.06 (179.2)	—	5.79 (147.0)	0.91 (23.0)	2.17 (55.0)	1.89 (48.0)	1.81 (46.0)	Rc1/8	1.38 (35.0)	2-M5 Depth 0.31 (8.0)
	XD4CS-S□	1/4"Compression	1.89 (48.0)	0.31 (7.9)	2.54 (64.5)	0.43 (11.0)	1.56 (39.7)	1.10 (28.0)	0.98 (25.0)	Rc1/8	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	XD6CS-S□	1/2"Compression	2.52 (64.0)	0.50 (12.7)	3.31 (84.0)	0.63 (16.0)	2.17 (55.0)	1.24 (31.5)	1.10 (28.0)	Rc1/8	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD8CS-S□	1/2"Compression	2.52 (64.0)	0.50 (12.7)	3.31 (84.0)	0.63 (16.0)	2.17 (55.0)	1.24 (31.5)	1.10 (28.0)	Rc1/8	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD12CS-S□	3/4"Compression	4.96 (126.0)	0.56 (14.3)	5.79 (147.0)	0.91 (23.0)	2.17 (55.0)	1.89 (48.0)	1.81 (46.0)	Rc1/8	1.38 (35.0)	2-M5 Depth 0.31 (8.0)
	XD4CS-W□	1/4"Butt Weld	2.13 (54.0)	—	2.54 (64.5)	0.43 (11.0)	1.56 (39.7)	1.10 (28.0)	0.98 (25.0)	Rc1/8	1.00 (25.4)	2-M5 Depth 0.20 (5.0)
	XD6CS-W□	1/2"Butt Weld	2.72 (69.0)	—	3.31 (84.0)	0.63 (16.0)	2.17 (55.0)	1.24 (31.5)	1.10 (28.0)	Rc1/8	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD8CS-W□	1/2"Butt Weld	2.72 (69.0)	—	3.31 (84.0)	0.63 (16.0)	2.17 (55.0)	1.24 (31.5)	1.10 (28.0)	Rc1/8	1.10 (28.0)	2-M5 Depth 0.20 (5.0)
	XD12CS-W□	3/4"Butt Weld	6.14 (156.0)	—	5.79 (147.0)	0.91 (23.0)	2.17 (55.0)	1.89 (48.0)	1.81 (46.0)	Rc1/8	1.38 (35.0)	2-M5 Depth 0.31 (8.0)

* L1 dimension for compression fitting is the dimension of how far tube inserted from end of body.