

KITZ SCT

XD Series

Diaphragm Valve



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

Specifications

Size		XD4 (1/4")	XD8 (1/2")	XD12 (3/4")
Cv		0.27	0.7	1.7
Maximum Operation Pressure		142psig(0.98 MPa(G))		
Wetted Area Volume		0.083in ³ (1.36cm ³)	0.445in ³ (7.3cm ³)	2.11in ³ (34.6cm ³)
Fluid Temperature	PCTFE	-10°C~80°C		
	PI / PFA	-10°C~150°C		
Atmospheric Temperature		-10°C~60°C		
Leak Rates	Across the Seat He Leak Test Rates	$\leq 1 \times 10^{-9}$ sccs $(\leq 1 \times 10^{-10} \text{ Pa} \cdot \text{m}^3/\text{s})$		
	Inboard He Leak Test Rates	$\leq 1 \times 10^{-9}$ sccs $(\leq 1 \times 10^{-10} \text{ Pa} \cdot \text{m}^3/\text{s})$		
Actuation Pressure(Pneumatic)		58-102psig(0.4-0.7MPa(G))		
Cycle Life *1	Manual Valve	100,000 cycles	30,000 cycles	
	Pneumatic Valve	4 million cycles	300,000 cycles	

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

Grade	STD	EP	SEP
Body Material	SUS316L		SUS316LE (Double melt material)
Surface Roughness	$\leq R_z$ 126 μ in(3.2 μ m) $\leq R_a$ 20 μ in(0.5 μ m)		$\leq R_z$ 28 μ in(0.7 μ m) $\leq R_a$ 5 μ in(0.13 μ m)
Polish	Mechanical Polished		Electro Polished
Cleaning	Degreasing + Precision Cleaning		
Packaging	Single bagged Package		Double bagged Package

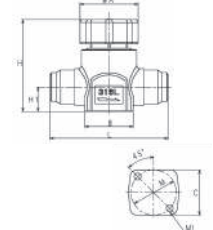
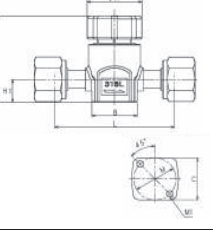
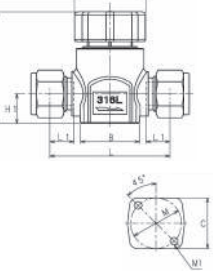
Body	SUS316L, SUS316LE
Seat	PCTFE, PI, PFA
Diaphragm	Cobalt alloy

Product Code Table

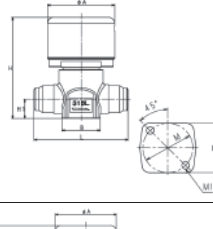
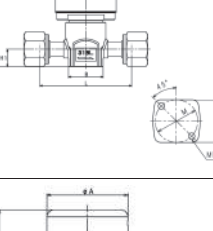
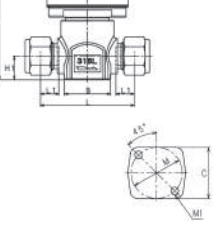
Model	Size	Operation	Valve Shape	Connection	Seat Material	Handle Color	Grade + Body Material
XD	4	M	S	V	C		EP-316L
XD :	4 : 1/4"	M : Manual Valve	S : Straight	V : CVC male	C : PCTFE	Not Shown : Blue(Standard)	STD-316L : Mechanical Polished+SUS316L
XD Type Diaphragm Valve	6 : 3/8"	C : Normally closed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

*SEP-316LE: 1/4", 1/2" are available

Manual

Model	Model	Connection	L	L1	H	H 1	A	B	C	M	M 1
	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)
	XD8MS-V□	1/2"CVC Male	3.03 (77.0)	—	2.38 (60.0)	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)
	XD8MS-VF□	1/2"CVC Female	3.27 (83.0)	—	2.38 (60.0)	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)	—	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□	3/8"Compression	2.52 (64.0)	—	2.38 (60.0)	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)	0.31 (7.9)	2.38 (60.0)	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)	0.50 (12.7)	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	H 1	A	B	C	P	M	M 1
	XD4CS-V□	1/4"CVC Male	2.24 (57.0)	—	2.54 (64.0)	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)
	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)	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 (64.0)	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)
	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)	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 (64.0)	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□	3/8"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)	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)	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)

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

■ Global Network

Tokyo Head Office

JRE Omorieki Higashiguchi Bldg. 3F, 1-5-1 Omorikita, Ota-ku,
Tokyo 143-0016, Japan
TEL. 81-3-6404-2171 FAX. 81-3-6404-2172

Osaka Sales Office

MG Amagasaki Ekimae Bldg. 3F, 21 Misono-cho, Amagasaki-shi,
Hyogo 660-0861, Japan
TEL. 81-6-6413-4177 FAX. 81-6-6413-4188

Nagoya Branch Office

Marunouchi One Bldg. 6F, 1-9-16, Marunouchi, Naka-ku, Nagoya-shi,
Aichi 460-0002, Japan
TEL. 81-52-221-0885 FAX. 81-6-6413-4188

Toyama Branch Office

Toyama Denki Bldg. 216, 3-1 Sakurabashidori, Toyama-shi,
Toyama 930-0004, Japan
TEL. 81-76-486-8181 FAX. 81-76-486-8101

Kyushu Sales Office

Z・S Fukuoka Bldg. 4F, 3-4-2 Higashiie, Hakata-ku, Fukuoka-shi,
Fukuoka 812-0007, Japan
TEL. 81-92-483-0185 FAX. 81-92-483-0186

Kumamoto Branch Office

A-5, 369 Bldg., 1775-2, Kikoji, Kikuchi-shi,
Kumamoto 861-1315, Japan
TEL. 81-968-24-3105 FAX. 81-968-24-3106

Nitta SC Factory

150-2 Nittakane-cho, Ota-shi,
Gunma 370-0352, Japan
TEL. 81-276-60-9600 FAX. 81-276-60-9330

KITZ SCT AMERICA CORPORATION

5201 Great America Parkway, Suite 238,
Santa Clara, CA 95054, USA
TEL. 1-408-747-5546 FAX. 1-408-747-5726

KITZ SCT CORPORATION TAIWAN REPRESENTATIVE OFFICE

3F-1, No.38 Beida Rd., East Dist.,
Hsinchu City, 30044, Taiwan (R.O.C.)
TEL. 886-3-542-0110 FAX. 886-3-542-0551

KITZ SCT CORPORATION OF KUNSHAN, Shanghai Branch Company

Room 1610B, Building A, China Overseas Center,
No. 2, 699 Tongchuan Road, Putuo District, Shanghai, P.R.China, 200333
TEL. 86-21-5243-5025 FAX. 86-21-6439-1257

KITZ SCT CORPORATION OF KUNSHAN

8-3 No.3 Road, Export Processing A Zone,
Kunshan, Jiangsu 215300, China,
TEL. 86-512-5735-0700 FAX. 86-512-5735-7500

KITZ SCT CORPORATION OF KUNSHAN BRANCH FACTORY

Bldg. 9, No. 68, Taoyuen Rd., Export Processing B Zone,
Kunshan, Jiangsu 215300, China



Caution

Product specifications and performance values described in this catalog are based on our design calculations, in-house testing, product usage performance, and public standards and specifications, and are posted as a user's guide under general usage conditions of the product. If the product is used outside of the described usage conditions or under special usage conditions, you should receive our technical advice in advance or it will be necessary to first conduct research and evaluation for performance verification at the users' own responsibility. Even if physical or personal damage occurs without use of this procedure, we shall assume no responsibility. Although this catalog has been edited with the utmost care possible, contact us if there are any unclear points or if you come across any questionable matter. In addition, information described in this catalog will be revised without notice due to reasons that include correction of errors, supplementation/improvement of insufficient content, improvement in product performance, design change, and discontinuation of production of products, etc., when deemed necessary. This invalidates the product catalog of the previous version. The issue code is described on the back of your catalog. For product selection, contact us to confirm whether your catalog is the latest version.

In addition, when exporting our products, exporters should obtain an export permit from the Ministry of Economy, Trade and Industry based on the provisions of the Export Trade Control Order of the "Foreign Exchange and Foreign Trade Act." Contact us regarding any unclear points.