

Responding to the latest demands

SMC High Purity Series

High levels of purity are increasingly required in the handling of fluids for advanced processing applications of semiconductors, pharmaceuticals, medicine, instrumentation, cleaning and food processing.

SMC high purity series products incorporate many new and unique innovations that minimize both particulate and chemical contamination to levels compatible with the most demanding requirements.

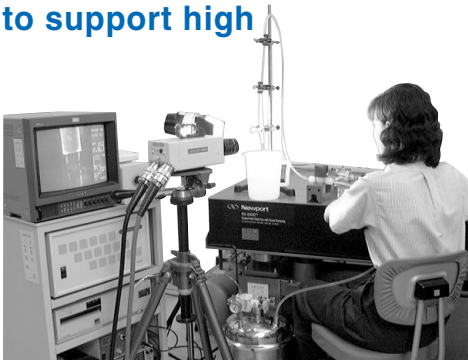
Cleaning, assembly and packaging are performed in a clean room to ensure the ultimate in product integrity.



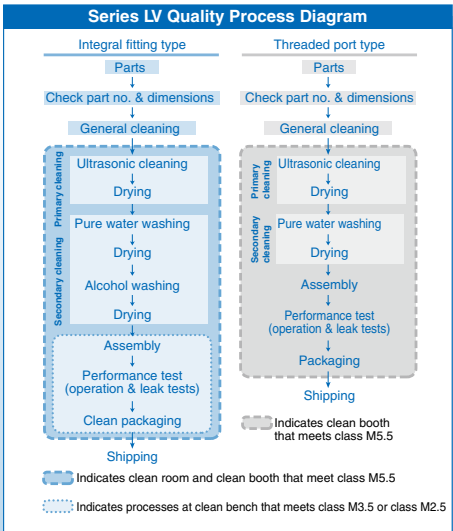
in process control

Complete laboratory facilities to support high quality and high reliability

Complete laboratory facilities, including a chemicals lab, a high temperature lab and a clean room, back up the high quality and high reliability of the LV Series by performing precise confirmation and verification of the product's performance and life.

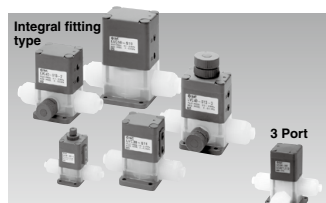


Laboratory



Series Variations

High Purity Chemical Liquid Valve Air Operated Integral Fitting Type



Series LVC

P.592

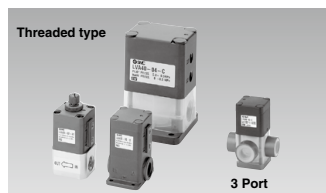
2 Port

Model	LVC2□	LVC3□	LVC4□	LVC5□	LVC6□
Orifice diameter	ø4	ø8	ø10	ø16	ø22
mm size	3, 4, 6	6, 8, 10	10, 12	12, 19	19, 25
inch size	1/8, 3/16, 1/4	1/4, 3/8	3/8, 1/2	1/2, 3/4	3/4, 1

3 Port

Model	LVC20□
Orifice diameter	ø4
mm size	4, 6
inch size	1/8, 3/16, 1/4

High Purity Chemical Liquid Valve Air Operated Threaded Type



Series LVA

P.606

2 Port

Model	LVA1□	LVA2□	LVA3□	LVA4□	LVA5□	LVA6□
Orifice diameter	ø2	ø4	ø8	ø12	ø20	ø22
Port size	1/8 1/4	1/8 1/4	1/4 3/8	3/8 1/2	1/2 3/4	1
Body material	Stainless steel 316	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○
Body material	PPS	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○
Body material	PFA	— — — — — — — — — — — —	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○

3 Port

Model	LVA2□0
Orifice diameter	ø4
Port size	1/4
Body material	PFA

High Purity Chemical Liquid Valve Manually Operated Integral Fitting Type/Threaded Type



Series LVH

P.617

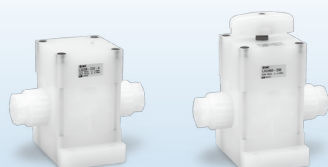
Integral fitting type

Model	LVH20	LVH30	LVH40
Orifice diameter	ø4	ø8	ø10
mm size	3, 4, 6	6, 8, 10	10, 12
inch size	1/8, 3/16, 1/4	1/4, 3/8	3/8, 1/2

Threaded port type

Model	LVH20	LVH30	LVH40
Orifice diameter	ø4	ø8	ø12
Body material	Stainless steel 316 PPS PFA	Stainless steel 316 PPS PFA	Stainless steel 316 PPS PFA
Port size	1/8 1/4 1/4	1/4 3/8 3/8 3/8	3/8 1/2 1/2 1/2

Large Diameter (1 1/4, 1 1/2)



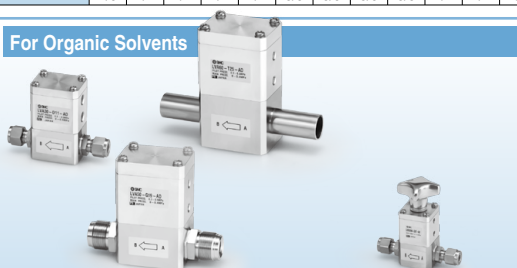
Air Operated

Series LVC80-Z

Manually Operated

Series LVH80M-Z

For Organic Solvents



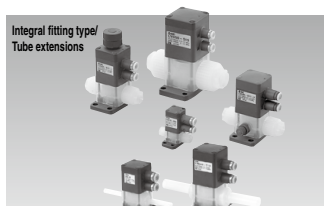
Air Operated

Series LVA-P-AD/AN

Manually Operated

Series LVH-P-AD/AN

High Purity Chemical Liquid Valve Air Operated Compact Type



Series LVD

P.631

Integral fitting type

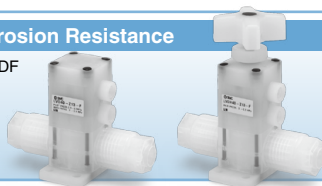
Model	LVD10	LVD20	LVD30	LVD40	LVD50
Orifice diameter	ø2	ø4	ø8	ø10	ø16
Tubing size	mm size	3, 4	4, 6	6, 8, 10	10, 12
	inch size	1/8	1/8, 3/16, 1/4	1/4, 3/8	3/8, 1/2, 1/2, 3/4

Tube extensions

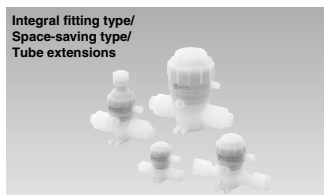
Model	LVD20	LVD30	LVD40	LVD50
Orifice diameter	ø4	ø8	ø10	ø16
Tubing size	mm size	6	10	12
	inch size	1/4	3/8	1/2

Improved Corrosion Resistance

Actuator section: PVDF



High Purity Chemical Liquid Valve Non-Metallic Exterior



Series LVQ

P.649

Integral fitting type

Model	LVQ20	LVQ30	LVQ40	LVQ50	LVQ60
Orifice diameter	ø4	ø8	ø10	ø16	ø22
Tubing size	mm size	3, 4, 6	6, 8, 10	10, 12	12, 19
	inch size	1/8, 3/16, 1/4	1/4, 3/8	3/8, 1/2	1/2, 3/4, 3/4, 1

Space-saving type

Model	LVQ20	LVQ30	LVQ40	LVQ50	LVQ60
Orifice diameter	ø4	ø8	ø10	ø16	ø22
Fitting size	2	3	4	5	6

Tube extensions

Model	LVQ20	LVQ30	LVQ40	LVQ50	LVQ60
Orifice diameter	ø4	ø8	ø10	ø16	ø22
Tubing size	mm size	6	10	12	19
	inch size	1/4	3/8	1/2	3/4

Vinyl Chloride Air Operated Valve



Series LVP

P.725

Model	LVP5□	LVP6□
Applicable tubing O.D.	O.D. ø22 (Nominal dia.16A)	O.D. ø26 (Nominal dia.20A) O.D. ø32 (Nominal dia.25A)
Orifice diameter	ø16	ø22
Valve type	N.C./N.O./Double acting	
Option	With flow rate adjustment	

PVC Quick Drain Valve



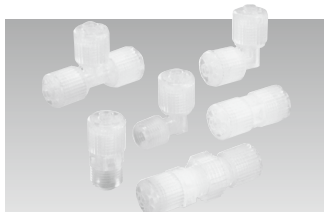
Series LVW

P.729

Model	LVW60	LVW80	LVW90
Applicable tubing O.D.	ø32 (Nominal dia. 25A)	ø38 (Nominal dia. 32A) ø48 (Nominal dia. 40A)	ø60 (Nominal dia. 50A) ø75 (Nominal dia. 65A) ø89 (Nominal dia. 80A)
Orifice diameter	ø25	ø40	ø65
Valve type	N.C.		

Series Variations

Fluoropolymer Hyper Fittings

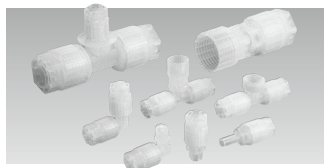


Series LQ1

P.735

Model		LQ1□10	LQ1□20	LQ1□30	LQ1□40	LQ1□50	LQ1□60
Max. operating pressure (at 20°C)		1.0 MPa					
Operating temperature		0 to 200°C					
Applicable tubing size	mm size	ø3 to ø25					
	inch size	1/8" to 1"					

Fluoropolymer Hyper Fittings Flare Type



Series LQ3

P.790

Model		LQ3□10	LQ3□20	LQ3□30	LQ3□40	LQ3□50	LQ3□60	LQ3□70
Material		NEW PFA						
Max. operating pressure (at 20°C)		1.0 MPa						
Operating temperature	Nut material PVDF	0 to 150°C						
	Nut material PFA	0 to 200°C						
Applicable tubing size	mm size	ø3 to ø25						
	inch size	1/8" to 1 1/4", 1 1/2" (LQ3□8)						

Fluoropolymer Needle Valve

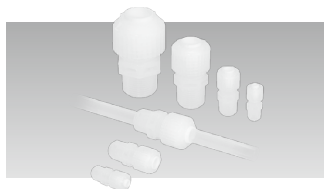


Series LVN

P.816

Model		LVN20	LVN30	LVN40
Orifice diameter		ø4.4	ø8	ø10
Tubing size	mm size	4, 6	6, 8, 10	10, 12
	inch size	1/8, 3/16, 1/4	1/4, 3/8	3/8, 1/2

Fluoropolymer Bore Through Connector



Series LQHB

P.819

Model		LQHB
Applicable tubing O.D.	mm size	3 to 25
	inch size	1/8 to 1
Operating temperature		0 to 200°C

Fluoropolymer Tubing

Series TL/TIL

P.826



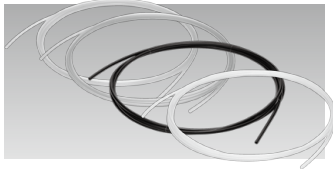
Model	TL (mm size)					
Tubing Model	TL0403	TL0604	TL0806	TL1008	TL1210	TL1916
O.D. x I.D. (mm)	ø4 x ø3	ø6 x ø4	ø8 x ø6	ø10 x ø8	ø12 x ø10	ø19 x ø16

Model	TIL (inch size)							
Tubing Model	TIL01	TILB01	TIL05	TIL07	TIL11	TIL13	TIL19	TIL25
Nominal size (inch)	1/8"	1/8"	3/16"	1/4"	3/8"	1/2"	3/4"	1"
O.D. x I.D. (inch)	1/8" x 0.086"	1/8" x 1/16"	3/16" x 1/8"	1/4" x 5/32"	3/8" x 1/4"	1/2" x 3/8"	3/4" x 5/8"	1" x 7/8"

Fluoropolymer Tubing (PFA)

Series TLM/TILM

From P.827



Model	TLM (mm size)						
Tubing Model	TLM0201	TLM0302	TLM0425	TLM0403	TLM0604	TLM0806	TLM1075
Tubing size	ø2 x ø1	ø3 x ø2	ø4 x ø2.5	ø4 x ø3	ø6 x ø4	ø8 x ø6	ø10 x ø7.5
O.D.	mm	2	3	4	6	8	10
I.D.	mm	1	2	2.5	3	4	7.5

Model	TLM (mm size)				
Tubing Model	TLM1008	TLM1209	TLM1210	TLM1613	TLM1916
Tubing size	ø10 x ø8	ø12 x ø9	ø12 x ø10	ø16 x ø13	ø19 x ø16
O.D.	mm	10	12	16	19
I.D.	mm	8	9	10	13

Model	TILM (inch size)				
Tubing Model	TILM01	TILMB01	TILM05	TILM07	TILM11
Tubing size	1/8" x 0.086"	1/8" x 1/16"	3/16" x 1/8"	1/4" x 5/32"	3/8" x 1/4"
O.D.	inch	1/8"	1/8"	3/16"	1/4"
O.D.	mm	3.18	4.75	6.35	9.53
I.D.	inch	0.086"	1/16"	1/8"	5/32"
I.D.	mm	2.18	1.58	3.15	6.33

Model	TILM (inch size)			
Tubing Model	TILM13	TILM19	TILM25	TILM32
Tubing size	1/2" x 3/8"	3/4" x 5/8"	1" x 7/8"	1-1/4" x 1-1/10"
O.D.	inch	1/2"	3/4"	1"
O.D.	mm	12.7	19.05	25.4
I.D.	inch	3/8"	5/8"	7/8"
I.D.	mm	9.5	15.85	22.2

LVC

LVA

LVH

LVD

LVQ

LVP

LVW

LQ1

LQ3

LVN

LQHB

TL

TIL

TLM

TILM

TD

TID

TH

TIH

Series Variations

Soft Fluoropolymer Tubing



Series TD/TID

From P.830

Model	TD (mm size)				
Tubing Model	TD0425	TD0604	TD0806	TD1075	TD1209
O.D. mm	4	6	8	10	12
I.D. mm	2.5	4	6	7.5	9

Model	TID (inch size)				
Tubing Model	TID01	TID05	TID07	TID11	TID13
O.D.	inch	1/8"	3/16"	1/4"	3/8"
	mm	3.18	4.75	6.35	9.53
I.D.	inch	0.086"	0.124" (1/8")	0.156" (5/32")	0.25" (1/4")
	mm	2.18	3.15	3.95	6.33

FEP Tubing (Fluoropolymer)



Series TH/TH

From P.832

Model	TH (mm size)						
Tubing Model	TH0402	TH0425	TH0604	TH0806	TH1075	TH1209	TH1210
O.D. mm	4	4	6	8	10	12	12
I.D. mm	2	2.5	4	6	7.5	8	9

Model	TH (inch size)										
Tubing Model	THA01	THB01	THC01	THA05	THB05	THA07	THB07	THA11	THB11	THI13	THI19
O.D.	inch	1/8"			3/16"		1/4"	3/8"		1/2"	3/4"
	mm	3.18			4.75		6.35	9.53		12.7	19.05
I.D.	inch	0.083"	0.086"	0.086"	0.137"	0.124" (1/8")	0.18"	0.156" (5/32")	0.275"	0.25" (1/4")	0.374" (3/8")
	mm	2.36	2.18	1.65	3.48	3.15	4.57	3.95	6.99	6.33	9.5