

Responding to the latest demands SMC High Purity Series

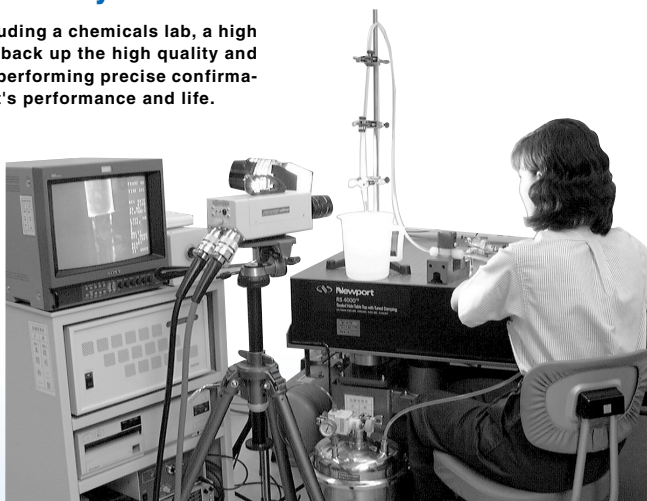
High levels of purity are increasingly required in the handling of fluids for advanced processing applications of semiconductors, pharmaceuticals, medicine, instrumentation, cleaning and food processing. SMC high purity series products incorporate many new and unique innovations that minimize both particulate 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.



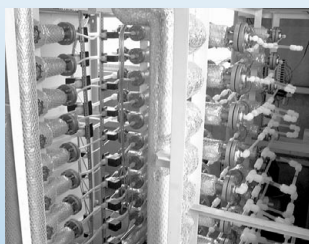
in process control

Complete laboratory facilities to support high quality and high reliability

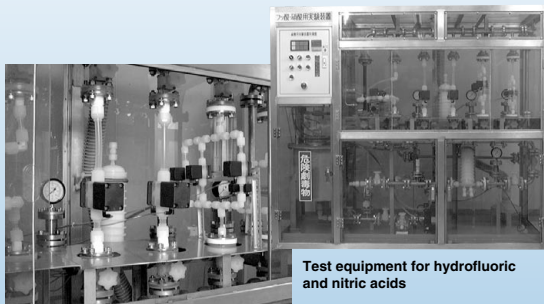
Complete laboratory facilities, including a chemicals lab, a high temperature lab and a clean room, back up the high quality and high reliability of the LV Series by performing precise confirmation and verification of the product's performance and life.



Laboratory



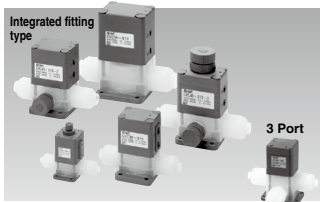
High temperature test line



Test equipment for hydrofluoric and nitric acids

Series Variations

High Purity Chemical Liquid Valve Air Operated Integrated Fitting Type



LVC Series

P.683

2 Port

Model	LVC2□	LVC3□	LVC4□	LVC5□	LVC6□
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 Port

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

High Purity Chemical Liquid Valve Air Operated Threaded Type



LVA Series

P.701

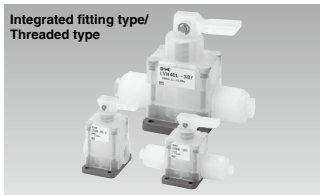
2 Port

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	3/8	1/2
	1/4	1/8	1/4	3/8	3/8	1/2
Body material	Stainless steel 316	○	○	○	○	○
	PPS	○	○	○	○	○
	PFA	○	○	○	○	○

3 Port

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

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



LVH Series

P.719

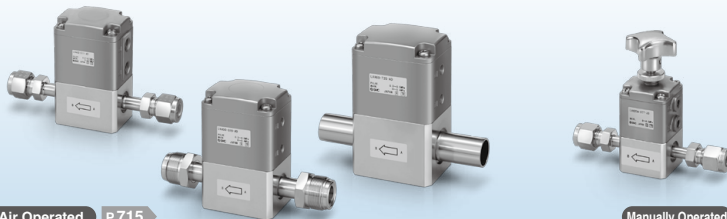
Integrated fitting type

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

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
	1/8	1/4	1/4	1/4	3/8	3/8	3/8	1/2	1/2
	1/4	1/4	1/4	3/8	3/8	3/8	1/2	1/2	1/2

For Organic Solvents



Air Operated P.715

LVA-D-AD/AN Series

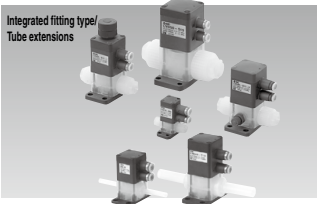
Manually Operated P.728

LVH-M-D-AD/AN Series

High Purity Chemical Liquid Valve Air Operated Compact Type

LVD Series

P.737



Integrated 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	12, 19
	inch size	1/8	1/8, 3/16, 1/4	1/4, 3/8	3/8, 1/2	1/2, 3/4

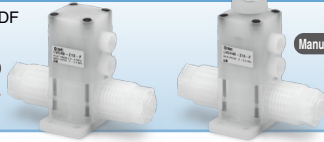
Tube extensions

Model	LVD20	LVD30	LVD40	LVD50	
Orifice diameter	ø4	ø8	ø10	ø16	
Tubing size	mm size	6	10	12	19
	inch size	1/4	3/8	1/2	3/4

Improved Corrosion Resistance

Actuator section: PVDF

Air operated
P.750

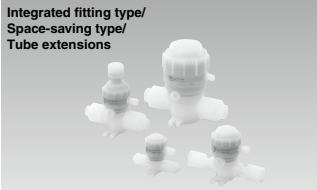


Manually operated
P.760

High Purity Chemical Liquid Valve Non-Metallic Exterior

LVQ Series

P.771



Integrated 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	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

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	25
	inch size	1/4	3/8	1/2	3/4	1

Vinyl Chloride Air Operated Valve

LVP Series

P.847



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

LVW Series

P.851



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	ø80
Valve type	N.C.				

LVC

LVA

LVB

LVD

LVQ

LVP

LVW

LQ1

LQ3

LVN

LQHB

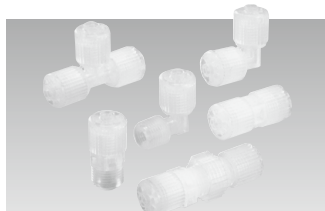
TL
TIL

TLM
TILM

TD
TID

TH
TID

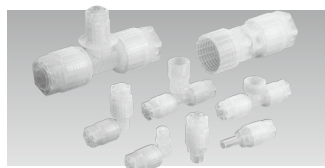
Series Variations

Fluoropolymer
Hyper Fittings

LQ1 Series

P.857

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

LQ3 Series

P.912

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)						

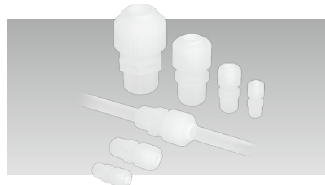
Fluoropolymer Needle Valve



LVN Series

P.938

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

LQHB Series

P.941

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

TL/TIL Series

P.947



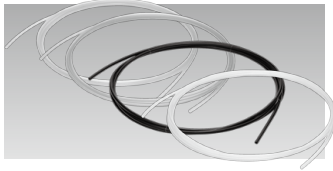
Model	TL (mm size)					
Tubing Model	TL0403	TL0604	TL0806	TL1008	TL1210	TL1916
O.D. x I.D. (mm)	ø4 x ø3	ø6 x ø4	ø8 x ø6	ø10 x ø8	ø12 x ø10	ø19 x ø16

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)

TLM/TILM Series

From P.949



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	TLM2522
Tubing size	ø10 x ø8	ø12 x ø9	ø12 x ø10	ø16 x ø13	ø19 x ø16	ø25 x ø22
O.D.	mm	10	12	16	19	25
I.D.	mm	8	9	12	13	16

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"
	mm	3.18		4.75	6.35
I.D.	inch	0.086"	1/16"	1/8"	5/32"
	mm	2.18	1.58	3.15	3.95

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"
	mm	12.7	19.05	25.4
I.D.	inch	3/8"	5/8"	7/8"
	mm	9.5	15.85	22.2

LVG

LVA

LVH

LVD

LVQ

LVP

LWV

LQ1

LQ3

LVN

LQHB

TL

TIL

TLM

TD

TID

TH

TIH

Series Variations

Soft Fluoropolymer Tubing



TD/TID Series

From P.952

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"	1/2"
	mm	3.18	4.75	6.35	9.53	12.7
I.D.	inch	0.086"	0.124" (1/8")	0.156" (5/32")	0.25" (1/4")	0.374" (3/8")
	mm	2.18	3.15	3.95	6.33	9.5

FEP Tubing (Fluoropolymer)



TH/TH Series

From P.954

Model		TH (mm size)							
Tubing Model		TH0402	TH0425	TH0604	TH0806	TH1075	TH1008	TH1209	TH1210
O.D.	mm	4	4	6	8	10	10	12	12
I.D.	mm	2	2.5	4	6	7.5	8	9	10

Model		THI (inch size)										
Tubing Model		THI01	THI01	THI01	THI05	THI05	THI07	THI07	THI11	THI11	THI13	THI13
O.D.	inch	1/8"			3/16"		1/4"		3/8"		1/2"	
	mm	3.18			4.75		6.35		9.53		12.7	
I.D.	inch	0.093"	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")	0.624" (5/8")
	mm	2.36	2.18	1.65	3.48	3.15	4.57	3.95	6.99	6.33	9.5	15.85