

High Purity Fluoropolymer Needle Valve

Series *LVN*

How to Order

LVN **2** 0 – S **07**

Body class

Symbol	Body class	Orifice dia.
2	2	ø4.4
3	3	ø8
4	4	ø10

A port (IN)

Applicable tubing size

Symbol	Connecting tubing O.D.	Body class		
		2	3	4
Metric sizes				
04	ø4	●		
06	ø6	○	●	
08	ø8		●	
10	ø10		○	●
12	ø12			○
Inch sizes				
03	1/8	●		
05	3/16	●		
07	1/4	○	●	
11	3/8		○	●
13	1/2			○

○ Basic size ● With reducer

Note) Applicable fitting: LQ2

Port B (OUT) different dia. size

Symbol	Application
Nil	Port A & B same size
	Refer to the applicable tubing table to the left. Different diameter tubing can be selected within the same body class.

Different diameter tubing order example

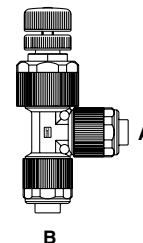
Different diameter tubing (with plug-in reducer) can be selected within the same body class.

(Example) Body class 3

A side: ø10 x ø8

B side: ø8 x ø6

Order as shown below.



LVN30 – S **10** **08**

• Different dia. tubing size (B side)

• Applicable tubing size (A side)

High Purity Fluoropolymer Needle Valve Series LVN



Standard Specifications

Model		LVN20	LVN30	LVN40
Tubing O.D.	Metric size	4, 6	6, 8, 10	10, 12
	Inch size	1/8, 1/16, 1/4	1/4, 3/8	3/8, 1/2
Orifice diameter		ø4.4	ø8	ø10
Flow characteristics	$Av \times 10^{-6} m^2$	12	33.6	52.8
	Cv	0.5	1.4	2.2
Withstand pressure (MPa)		1		
Operating pressure (MPa)		0 to 0.5		
Fluid temperature (°C)		5 to 90		
Ambient temperature (°C)		0 to 60		
Weight (kg)		0.055	0.115	0.185

Different Diameter Tubing Applicable with Reducer

Different diameter tubing can be selected (within a body class) by using a nut and insert bushing (reducer). Applicable fitting: LQ2

Body class	Tubing O.D.									
	Metric sizes					Inch sizes				
	4	6	8	10	12	1/8	3/16	1/4	3/8	1/2
2	●	○				●	●	○		
3		●	●	○				●	○	
4				●	○				●	○

Note) Refer to page 17-5-127 for information on changing tubing sizes.

○ Basic size
● With reducer

⚠ Specific Product Precautions

Be sure to read before handling. Refer to page 17-6-3 for Safety Instructions and 17-5-138 to 17-5-139 for High Purity Chemical Valve Precautions.

Piping

⚠ Caution

1. Connect tubing with special tools.

Refer to pages 17-5-127 through 17-5-129 regarding tubing connection and special tools.

2. Tighten the nut to the end surface of the body. As a guide, refer to the proper tightening torques shown below.

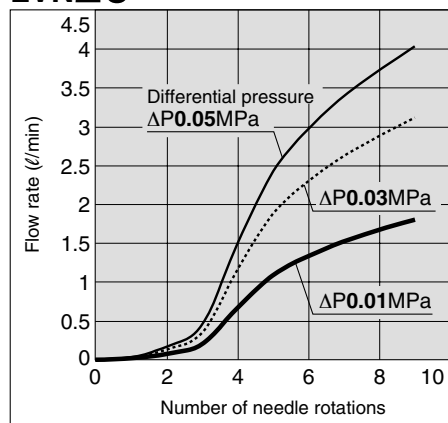
Tightening torque for piping

Body class	Torque (N·m)
2	1.5 to 2.0
3	3.0 to 3.5
4	7.5 to 9

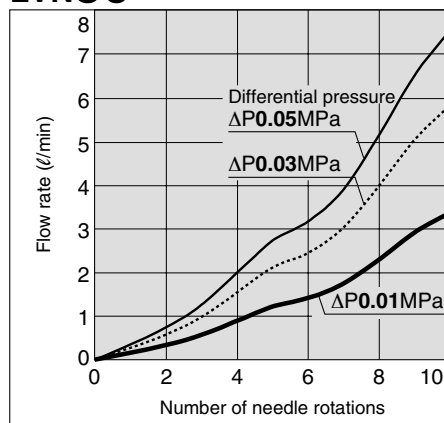
Series LVN

Flow Characteristics (Fluid: Water)

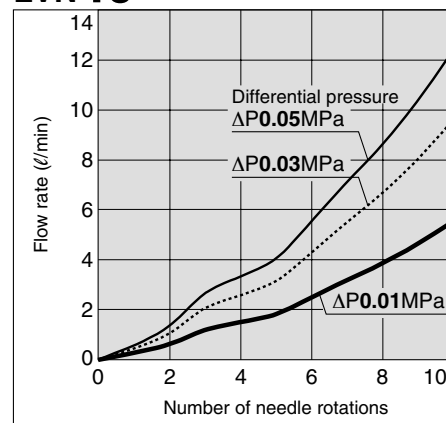
LVN20



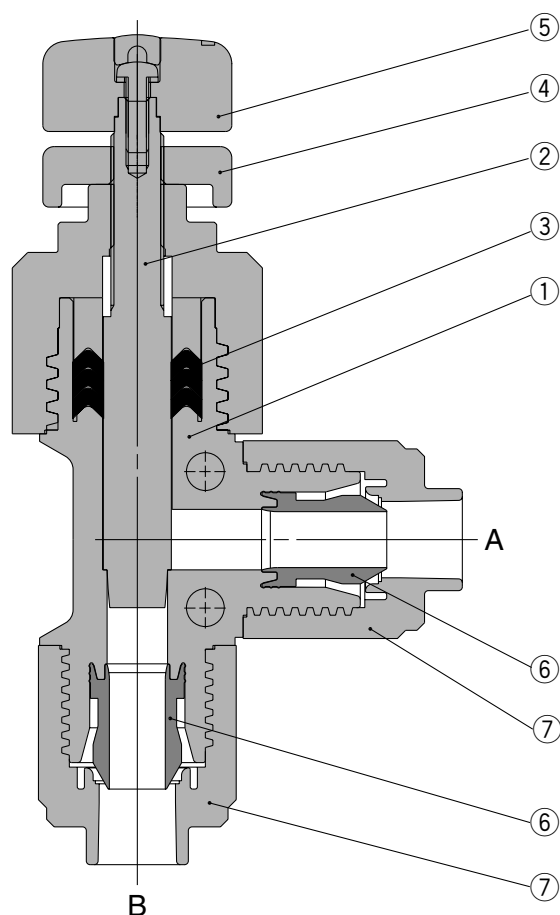
LVN30



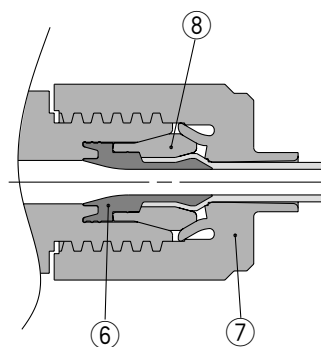
LVN40



Construction



With reducer

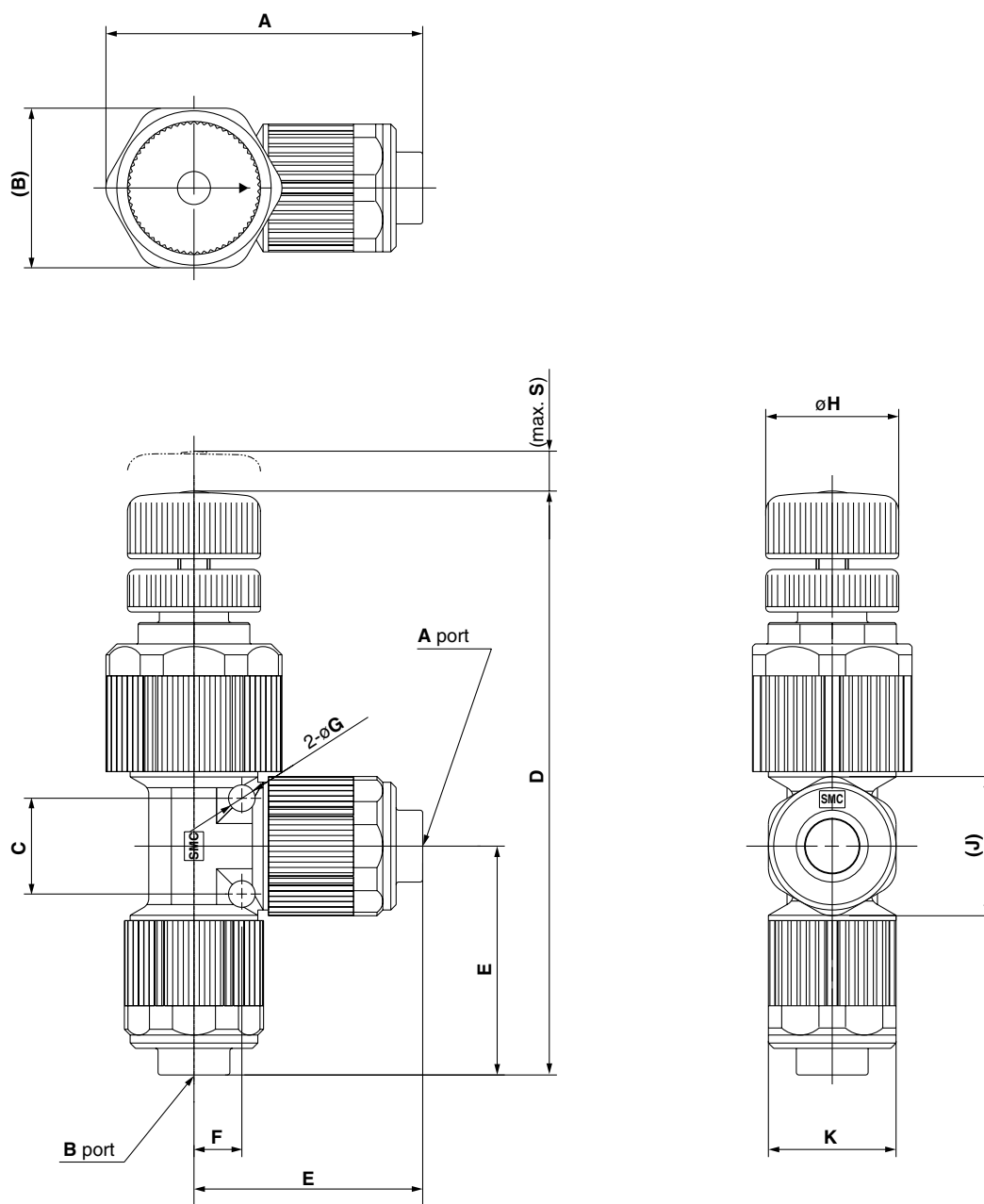


Part lists

No.	Description	Material
1	Body	PFA
2	Needle	PCTFE
3	V seal	PTFE
4	Lock nut	PVDF
5	Adjustment handle	PVDF
6	Insert bushing	PFA
7	Nut	PFA
8	Collar	PFA

High Purity Fluoropolymer Needle Valve Series **LVN**

Dimensions



VC□

VDW

VQ

VX2

VX□

VX3

VXA

VN□

LVC

LVA

LVH

LVD

LVQ

LQ

LVNTI/
TIL

PA

PAX

PB

Model	A	B	C	D	E	F	G	H	J	K	S
LVN20	48	24	12	88	34.5	6	4	14	20	18	2.4
LVN30	60	30	18	110	43	9	5	25	26	24	7.5
LVN40	72	36	22	124	52	11	6	25	33	30	8