

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
	Different diameter tubing can be selected within the same body class.

Different diameter tubing order example

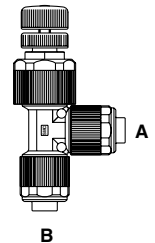
Different diameter tubing (with plug-in reducer) can be selected within the same body class.

(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

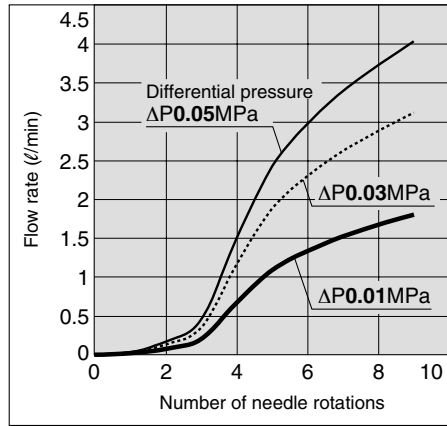
Body class	Torque (N·m)
2	1.5 to 2.0
3	3.0 to 3.5
4	7.5 to 9

VC VDW VQ VX2 VX VX3 VXA VN LVC LVA LVH LVD LVQ LQ LVN TI/
TIL PA PAX PB

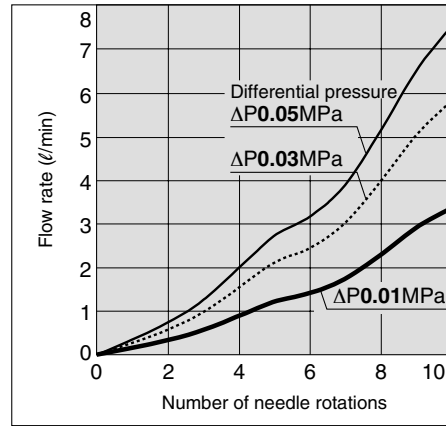
Series LVN

Flow Characteristics (Fluid: Water)

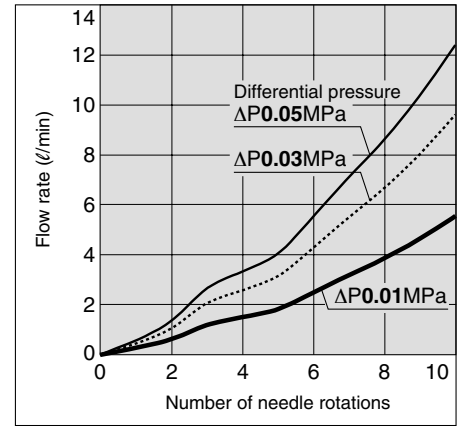
LVN20



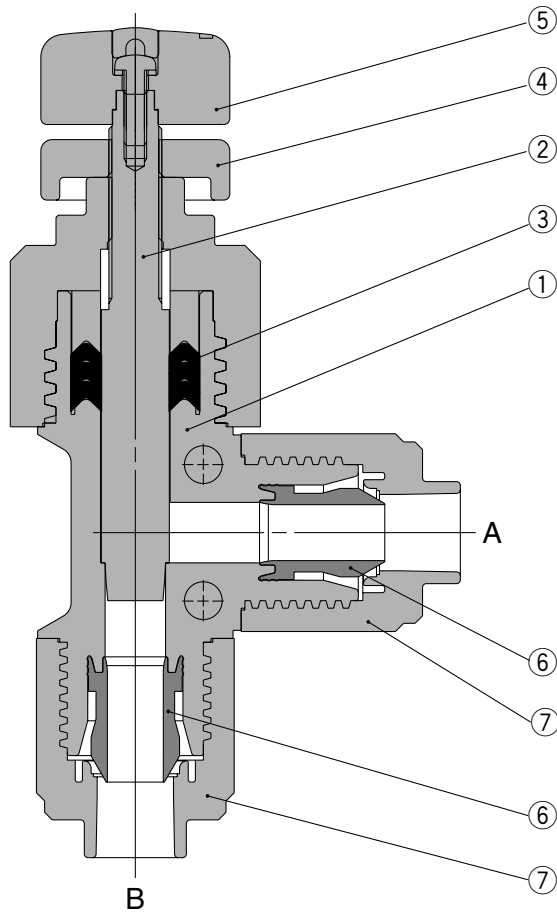
LVN30



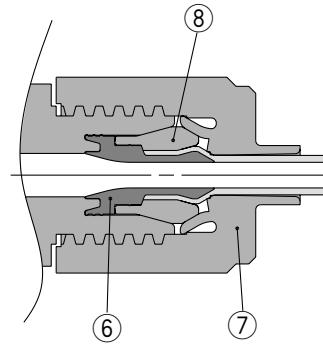
LVN40



Construction



With reducer

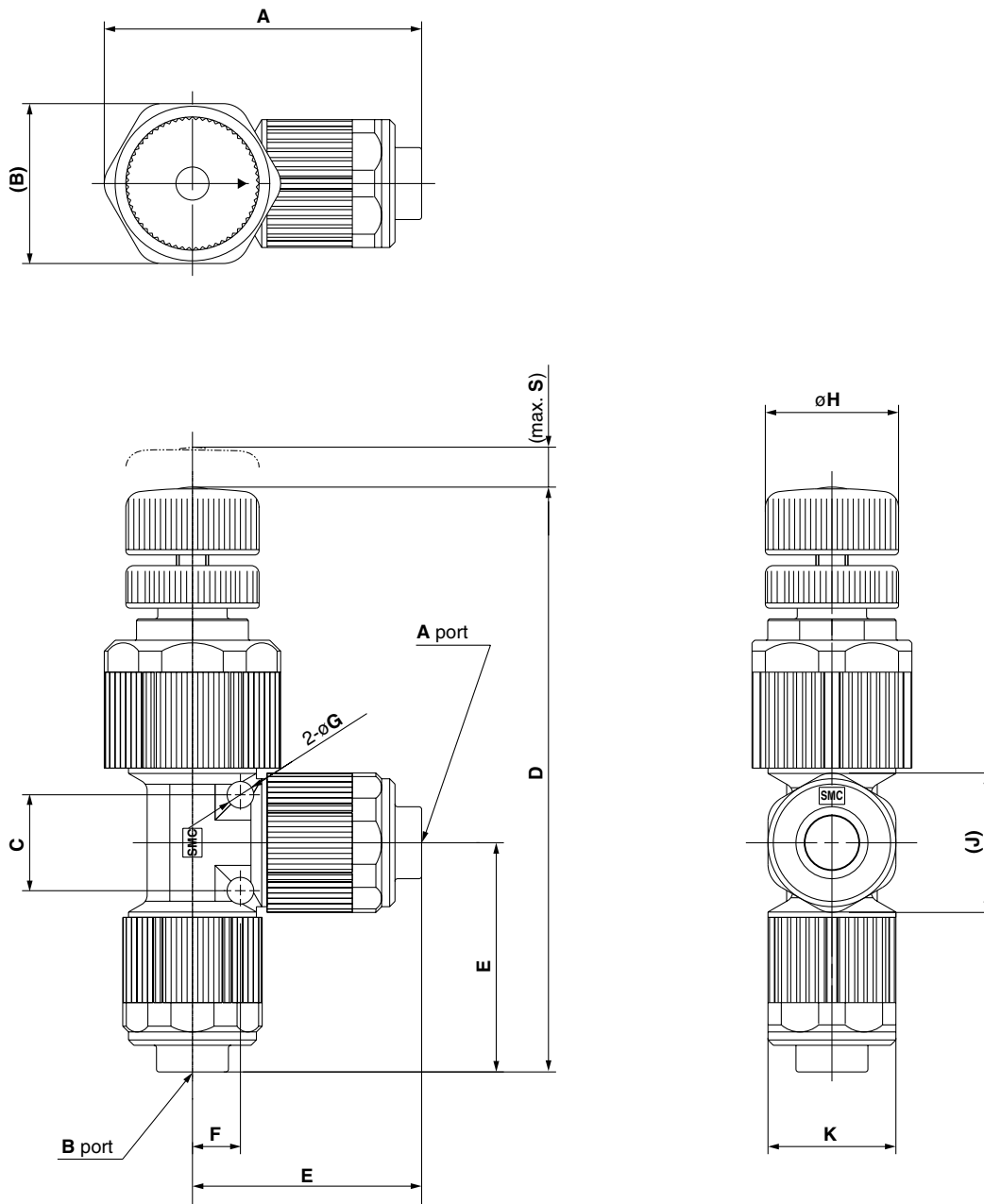


Part lists

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