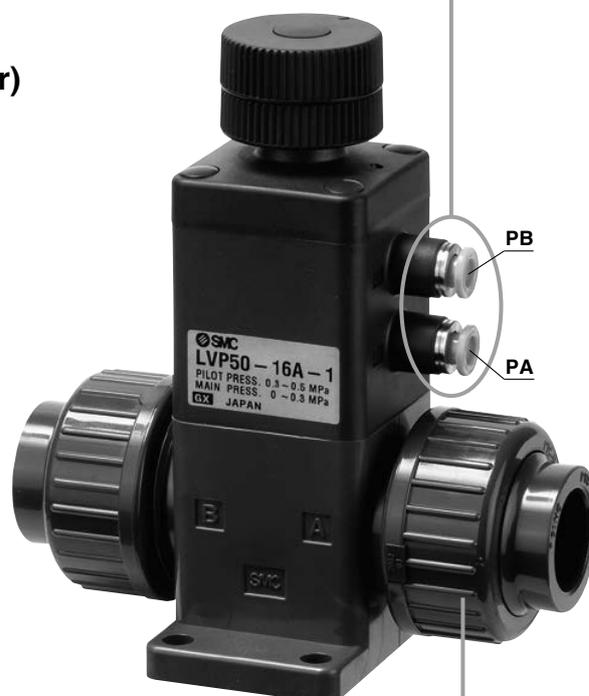
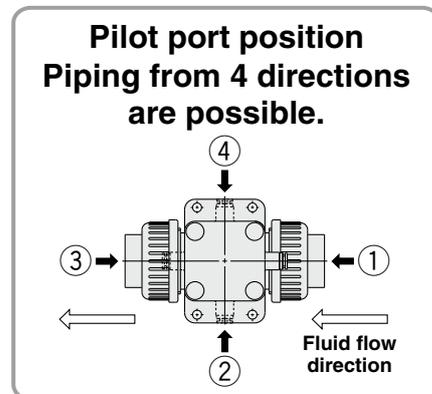
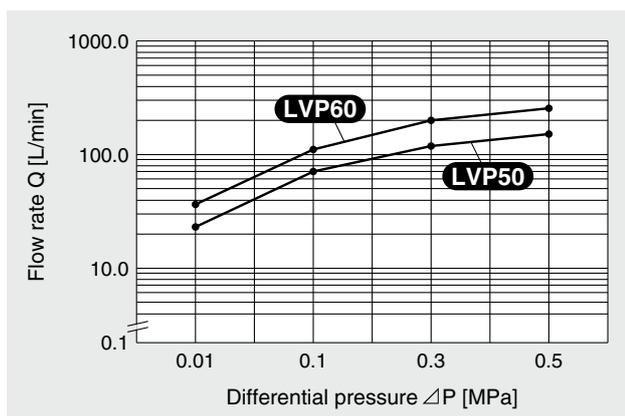


# Vinyl Chloride Air Operated Valve

## LVP Series

- Employs vinyl chloride CPVC for body material
- Fluid wetted part materials: Diaphragm: PTFE  
Body: CPVC
- O-ring can be selected: FKM (Standard)  
EPDM (Option)
- Applicable fluids: Deionized water, chemical liquids
- Low water hammer: Reduced by 50% compared with the standard type
- Export Trade Control Order  
Not applicable for list control
- Flow rate characteristics (Deionized water)

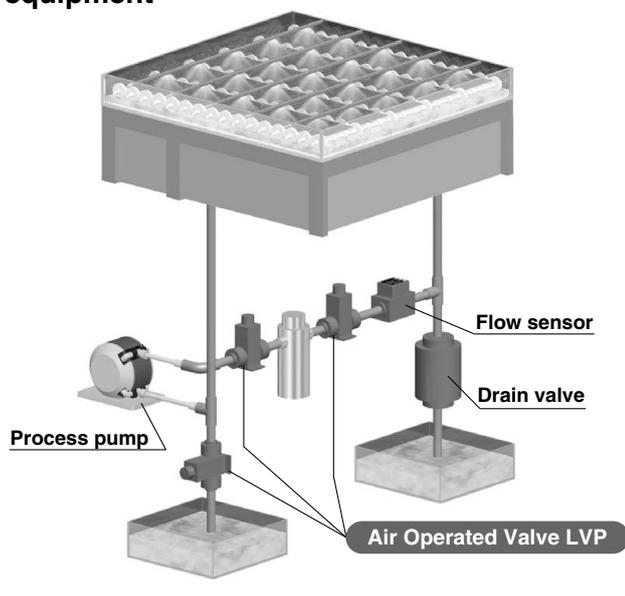


With PVC unfixed union

Applicable to rigid vinyl chloride tube

### Application Example

#### Cleaning equipment



# Vinyl Chloride Air Operated Valve

# *LVP Series*

## How to Order

LVP **5** **0** **W** - **16A** **P2** -

### Series

Symbol	Body size	Orifice dia.
<b>5</b>	5	ø16
<b>6</b>	6	ø22

### Valve type

<b>0</b>	N.C.
<b>1</b>	N.O.
<b>2</b>	Double acting

### Type

Symbol	Type
<b>Nil</b>	Standard
<b>W</b>	Low water hammer type

### Applicable tubing size

Symbol	Applicable PVC piping external diameter	Applicable series
<b>16A</b>	ø22	LVP5□
<b>20A</b>	ø26	LVP6□
<b>25A</b>	ø32	

### Option

Symbol	Option	Applicable valve type		
		N.C.	N.O.	Double acting
<b>Nil</b>	None	○	○	○
<b>1</b>	With flow rate adjustment	○	—	○
<b>2</b>	With bypass	○	—	○
<b>3</b>	With flow rate adjustment/bypass	○	—	○

### Rubber material

Symbol	Material
<b>Nil</b>	FKM
<b>N</b>	EPDM

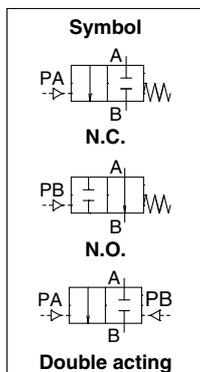
### Pilot port position

(Refer to the figure on the previous page.)

Symbol	Position
<b>Nil</b>	①
<b>P2</b>	②
<b>P3</b>	③
<b>P4</b>	④

### Pilot port thread (fitting) type

Symbol	Thread (fitting) type
<b>Nil</b>	ø6 mm One-touch fitting
<b>1</b>	Rc1/8
<b>2</b>	M5 x 0.8
<b>N</b>	NPT1/8



## Specifications

Model		LVP5□	LVP6□
Fluid pressure		0 to 0.3 MPa	0 to 0.4 MPa
Withstand pressure		1 MPa	
Pilot pressure		0.3 to 0.5 MPa	
Back pressure	Valve type: N.C. type	0.2 MPa or less	
	Valve type: N.O. type	0.2 MPa or less	
	Valve type: Double acting type	0.3 MPa or less	
Valve leakage		0 cm <sup>3</sup> /min (with water pressure 0.3 MPa)	0 cm <sup>3</sup> /min (with water pressure 0.4 MPa)
Fluid		Deionized water, chemical liquids (Fluid wetted part materials, fluid that does not corrode rigid vinyl chloride tube)	
Orifice diameter		ø16 mm	ø22 mm
Flow rate characteristics Kv (Cv)		4.2 (5)	8.1 (9.5)
Fluid temperature		0 to 60°C (No freezing)	
Ambient temperature		0 to 60°C	
Fluid wetted part material	Diaphragm	PTFE	
	Body	CPVC	
Port size		PVC unfixed union (Nominal dia.: 16A)	PVC unfixed union (Nominal dia.: 20A or 25A)
Applicable tube		Rigid vinyl chloride tube <sup>Note 1)</sup> O.D. ø22 mm (Nominal dia.: 16A)	Rigid vinyl chloride tube <sup>Note 1)</sup> O.D. ø26 mm (Nominal dia.: 20A) O.D. ø32 mm (Nominal dia.: 25A)
Pilot port size		ø6 mm One-touch fitting <sup>Note 2)</sup> Rc1/8, M5 x 0.8, NPT1/8	
Operating frequency		10 times/min (reference)	

Note 1) Rigid vinyl chloride tube complies with JIS K6742

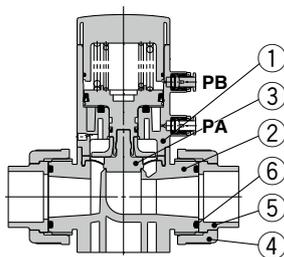
Note 2) SMC polyolefin tubing (TRH series) and soft polyolefin tubing (TPH series) are recommended for piping since the same mechanism and construction as SMC KP series are used for ø6 mm One-touch fittings.

Complement: Polyurethane tubing (TU series), nylon tubing (T series), and soft nylon tubing (TS series) can be used, but the degree of clean performance will be reduced.

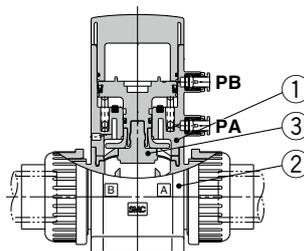
## Construction

### Standard type

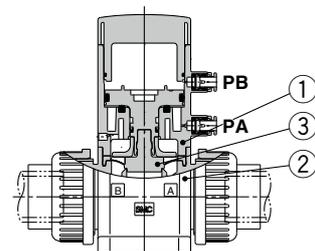
N.C. type



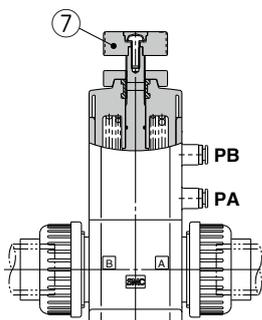
N.O. type



Double acting type



### With flow rate adjustment



### Component Parts

No.	Description	Material	Option
1	Actuator section	PPS	—
2	Body	CPVC	—
3	Diaphragm	PTFE	—
4	Union nut	U-PVC	—
5	Union end	U-PVC	—
6	O-ring	FKM	EPDM
7	Flow rate adjuster section	PPS	—

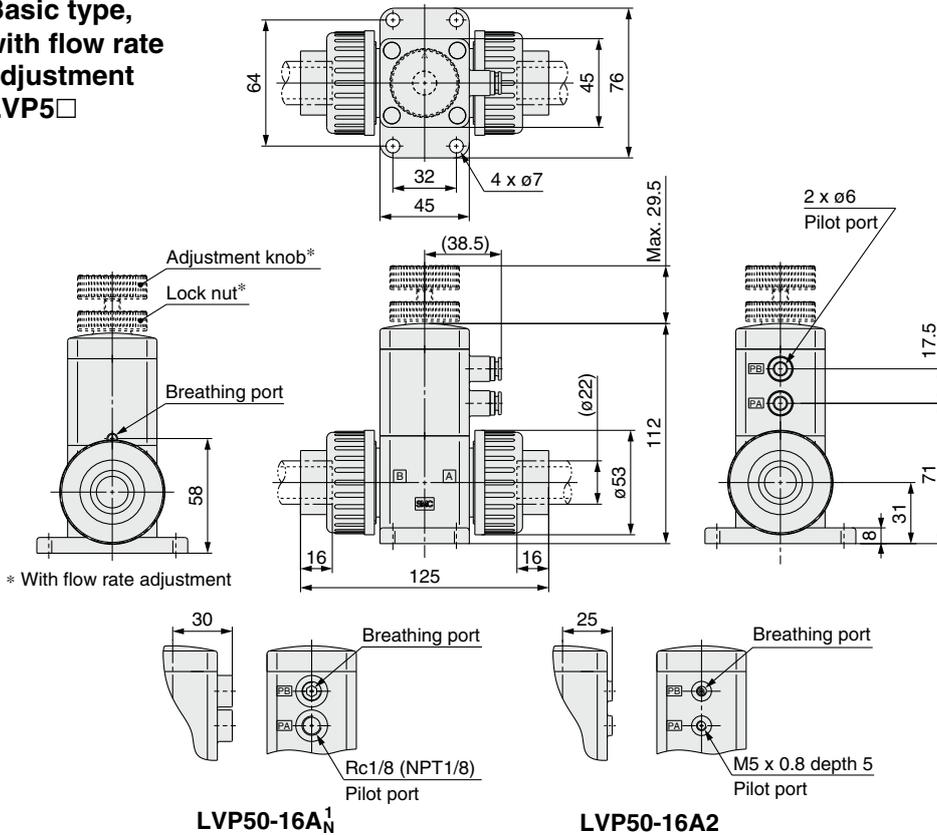
### Replacement Parts

No.	Description	Part no.	Applicable model
4	Union Nut	LVP50-31-16-X17	LVP5□-16A□
		LVP60-31-20-X17	LVP6□-20A□
		LVP60-31-25-X17	LVP6□-25A□
5	Union end	LVP50-30-16-X17	LVP5□-16A□
		LVP60-30-20-X17	LVP6□-20A□
		LVP60-30-25-X17	LVP6□-25A□

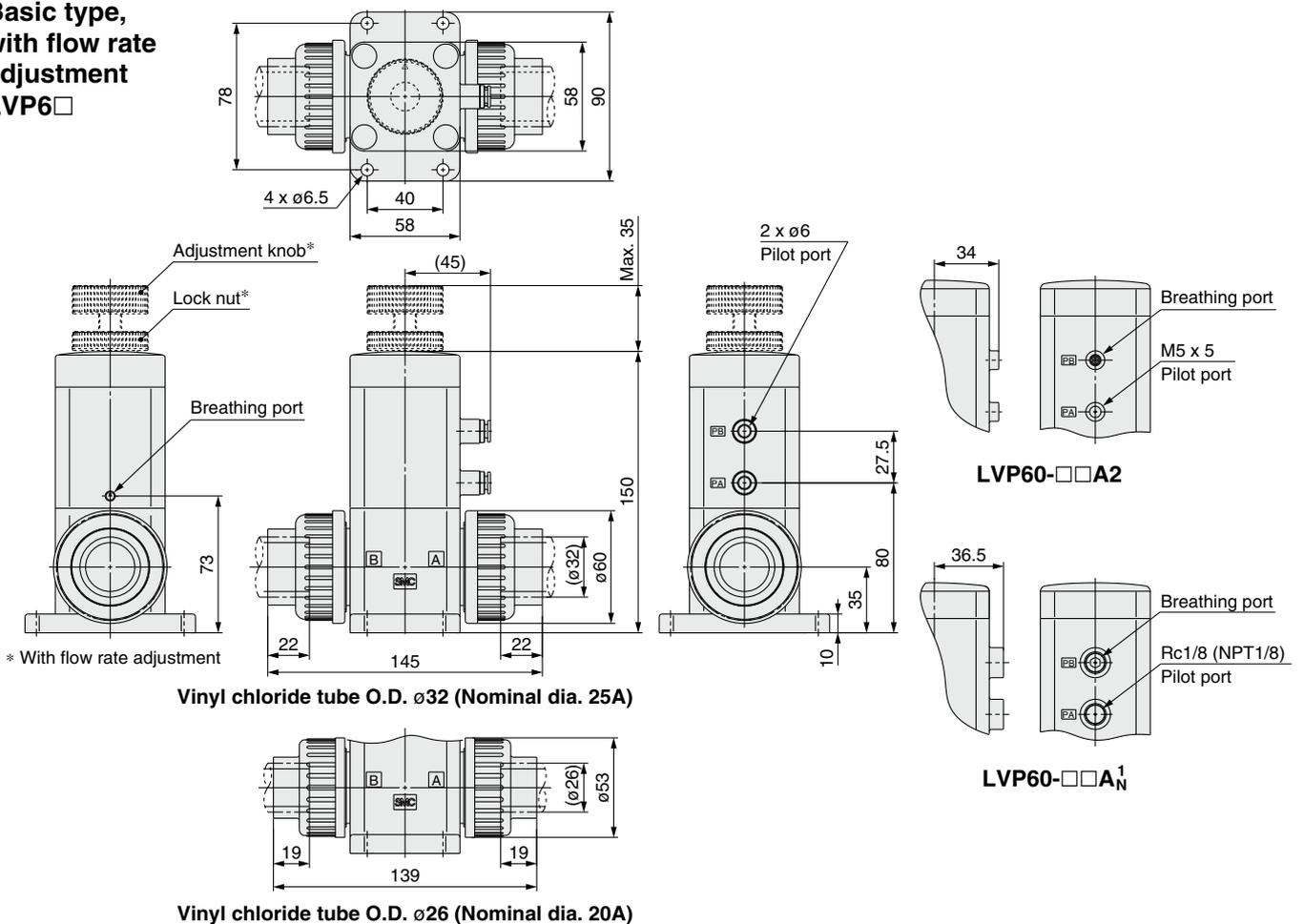
# LVP Series

## Dimensions

Basic type,  
with flow rate  
adjustment  
LVP5□



Basic type,  
with flow rate  
adjustment  
LVP6□





## LVP Series

# Applicable Fluids

### Material and Fluid Compatibility Check List for Vinyl Chloride Air Operated Valves

Chemical		Compatibility
<b>Ammonium hydroxide</b>	Temperature 40°C or less	○ Material option "N" Note 2)
<b>Isobutyl alcohol</b>	Temperature 40°C or less	○ Note 1) Note 2)
<b>Isopropyl alcohol</b>	Temperature 40°C or less	○ Note 1) Note 2)
<b>Hydrochloric acid</b>	Concentration 30% or less	○ Note 2)
<b>Hydrogen peroxide</b>	Concentration 5% or less, Temperature 50°C or less	○
<b>Nitric acid (except fuming nitric acid)</b>	Concentration 10% or less, Temperature 40°C or less	○ Note 2)
<b>Deionized water</b>		○
<b>Sodium hydroxide (Caustic soda)</b>	Concentration 50% or less	○
<b>Nitrogen gas</b>		○
<b>Super pure water</b>		○
<b>Sulfuric acid (except fuming sulfuric acid)</b>	Concentration 30% or less	○ Note 2)
<b>Phosphoric acid</b>	Concentration 50% or less	○

The material and fluid compatibility check list provides reference values as a guide only.  
 Note 1) Since static electricity may be generated, implement suitable countermeasures.  
 Note 2) Use caution as permeation may occur. The permeated fluid may effect the parts of other materials.

Table symbols  
 ○ : Can be used  
 ○ : Can be used in certain conditions

- Compatibility is indicated for fluid temperatures of 60°C or less.
- The material and fluid compatibility check list provides reference values as a guide only, therefore we do not guarantee the application to our product.
- The data above is based on the information presented by the material manufacturers.
- SMC is not responsible for its accuracy and any damage happened because of this data.



## **LVP Series**

# **Specific Product Precautions**

Be sure to read this before handling the products. Refer to page 501 for safety instructions. The specific product precautions for this product are the same as those of the LVW series quick drain valve. Refer to pages 220 and 221 for details.

### **Return of Product**

#### **⚠ Warning**

If the product to be returned is contaminated or is possibly contaminated with substances that are harmful to humans, for safety reasons, please contact SMC beforehand and then employ a specialist cleaning company to decontaminate the product. After the decontamination prescribed above has been carried out, submit a Product Return Request Sheet or the Detoxification/Decontamination Certificate to SMC and await SMC's approval and further instructions before attempting to return the item.

Please refer to the International Chemical Safety Cards (ICSC) for a list of harmful substances.