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# DV-300

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## User manual



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## 1 General information

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### 1.1 General information

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This user manual provides the user and the equipment maintenance specialist with essential information for operating the equipment. Therefore, it is strongly recommended that you should thoroughly understand this user manual.

In order to have easy access to this user manual, it must be placed where it can be easily seen, near the equipment.

### 1.2 Warranty

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Except for a separate agreement and the following cases, the warranty period will be one year in the event of defects.

- Following -

1. In case you modify the equipment without permission by Taeha Corp.
2. If someone other than the technical support personnel of Taeha Corp. modifies the equipment or repairs the quipment without using the designated parts.
3. If any spare parts other than those specified by Taeha Corp. have been used for the product.
4. If the defect is due to an intentional damage.
5. If the defect is due to natural disasters or fire.

### 1.3 Technical support

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If necessary, Taeha Corp. will provide technical support service for the customer. Please contact us by phone or fax.

Head Office

Phone : +82(0)31 552 5300

Fax : +82(0)31 552 5400

## 2 Features

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### 2.1 Introduction

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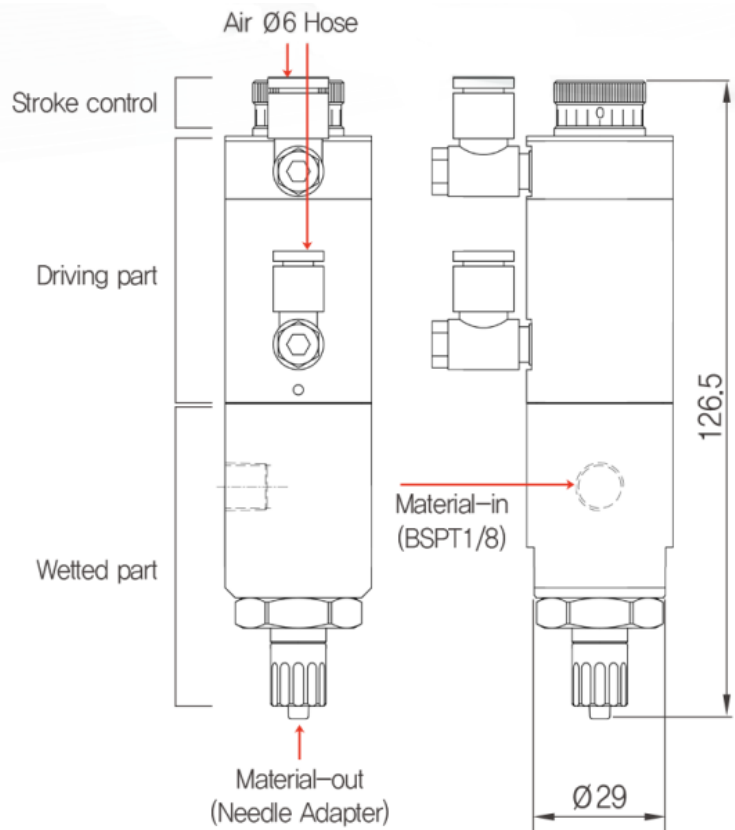
The DV-300 valve is a multipurpose pneumatically operated valve that can be used for a wide range of materials from low viscosity materials to medium viscosity materials due to its poppet type structure.

It has a sniff back effect when the valve is closed, and is clean without the ball-up phenomenon after dispensing viscous liquids (silicon RTV, epoxy, rubber bond, grease, filler-containing liquid, etc.).

Shot amount can be adjusted according to the material viscosity, material feeding pressure and valve stroke size, etc.

Please read this manual carefully and proceed with the work that you want to maximize the performance of the product.

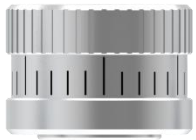


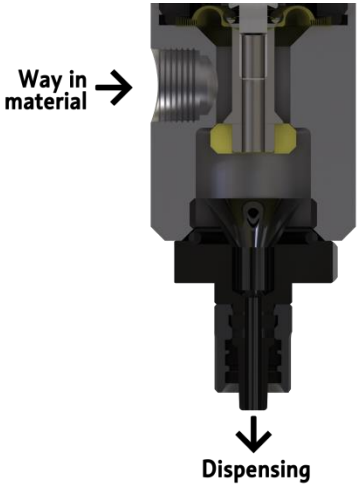
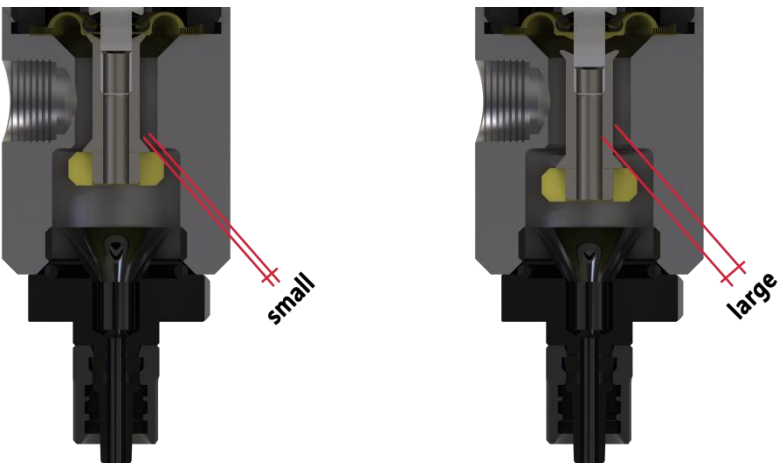
## 2.2 Specification



Item		Description
Dimension [mm]		Ø29.0 x L126.5
Weight		200g
Driving air pressure		More than 0.4MPa
Material feeding pressure		Max. 0.6MPa
Port Size	Air in	Ø6 hose
	Material in	BSPT 1/8"
	Material out	Luer lock(male)
Flow rate(KV)		2.4L/min
Driving part material		AL
Wet part material		AL

### 3 Operation

#### 3.1 Operation principles

Dispensing off	Dispensing on								
		<table border="1" data-bbox="855 443 1174 600"> <tr> <td>Short</td> <td>Stroke</td> <td>Long</td> </tr> <tr> <td>little</td> <td>Flow rate</td> <td>much</td> </tr> </table>	Short	Stroke	Long	little	Flow rate	much	
Short	Stroke	Long							
little	Flow rate	much							
									
<p>When in the “Normal” state, the valve seat is closed and no dispensing is performed.</p>	<p>When air is input, the valve seat opens and dispense the material.</p>								
<p>The valve seat stays closed, the flow is off and does not dispensed.</p>	<p>When air is input to the drive unit, the valve seat is opened and the supplied material is dispensed. You can adjust the flow rate by changing the flow with the stroke adjustment.</p> <p><b>⚠ Caution</b>                      The maximum stroke adjustment range is 3mm. (6 rotations of the flow rate adjustment knob)                      There is no difference in the shot amount even if it is rotated more than 6 times.                      After completing the setting, fix it with the fixing screw.</p>								

## 3.2 Set-up

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1) Fasten firmly using mount hole.

2) Use air hose to connect air in port and controller. The valve drive pressure is at least 0.4MPa.

**⚠ Caution**

If the valve closing speed is delayed in the single acting type (if the operating frequency is increased or the closing speed is slowed down due to the viscosity of the liquid), use it in the double acting type.

(Single acting type : Use of spring)

3) Connect a fitting and a needle of appropriate size.

4) After adjusting the adjustment knob according to the shot amount, fix it with the fixing screw.

**⚠ Caution**

There is a sniff back effect in which the material is inhaled when the valve closes.

\* Sniff back effect : When the valve is closed, the valve seat rises and a volume change occurs, causing the material to be inhaled up..

Sniff back effect can be adjusted according to the material viscosity, material feeding pressure and valve stroke size, etc.

**∴ Sniff back amount  $\propto$  Material viscosity**  
**Material supply pressure**  
**Stroke**

## 3.3 Maintenance

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### 3.3.1 Washing

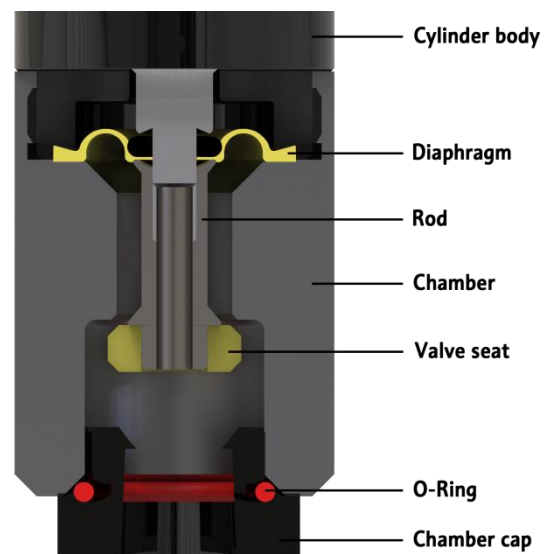
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- 1) After using the valve, if it is a liquid that cures naturally or a liquid that may damage the material of the valve contact part, clean it thoroughly.
- 2) Dispense until a sufficient amount of air comes out instead of the liquid inside material container, material supply hose and valve wetted part.
- 3) Add an appropriate amount of the appropriate solvent to wash away the liquid inside the valve.
- 4) Clean in order of 'air -> solvent -> air -> solvent' until it is sufficiently clean.

### 3.3.2 Disassembly

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- 1) Use two spanners to separate the chamber cap.
- 2) Use a screw driver to separate the valve seat.
- 3) Use a spanner to separate cylinder body and chamber.
- 4) Use a spanner to separate the rod.
- 5) Separate the diaphragm.



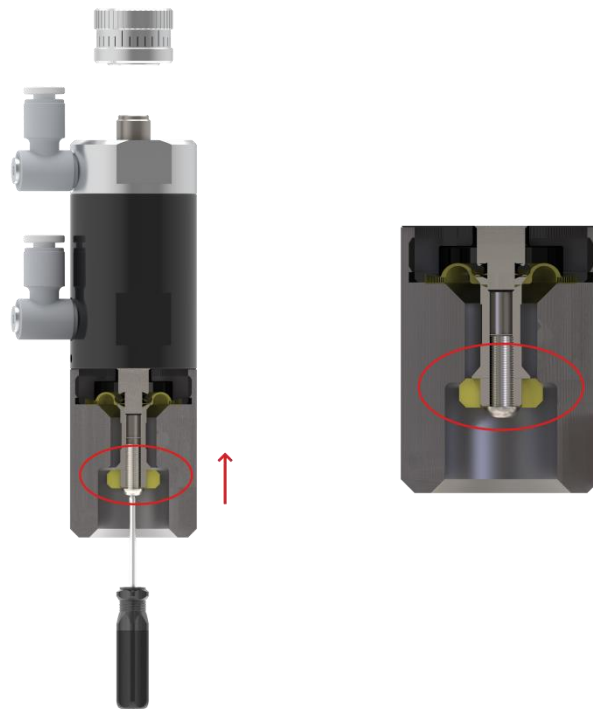


### 3.3.3 Assembly

Proceed in the reverse order of disassembly. See the notes below.

- 1) Insert the valve seat and insert the bolt. Then fix it with a philips screwdriver. With the adjustment knob separated as shown, fix the valve seat until it touches the chamber surface

At this time, please note that the piston and rod connection part may be damaged when assembling the bolt due to excessive force.



- 2) When assembling the cylinder body and valve chamber, be careful that the spanner girder of the valve chamber and the spanner girder of the cylinder body are aligned.

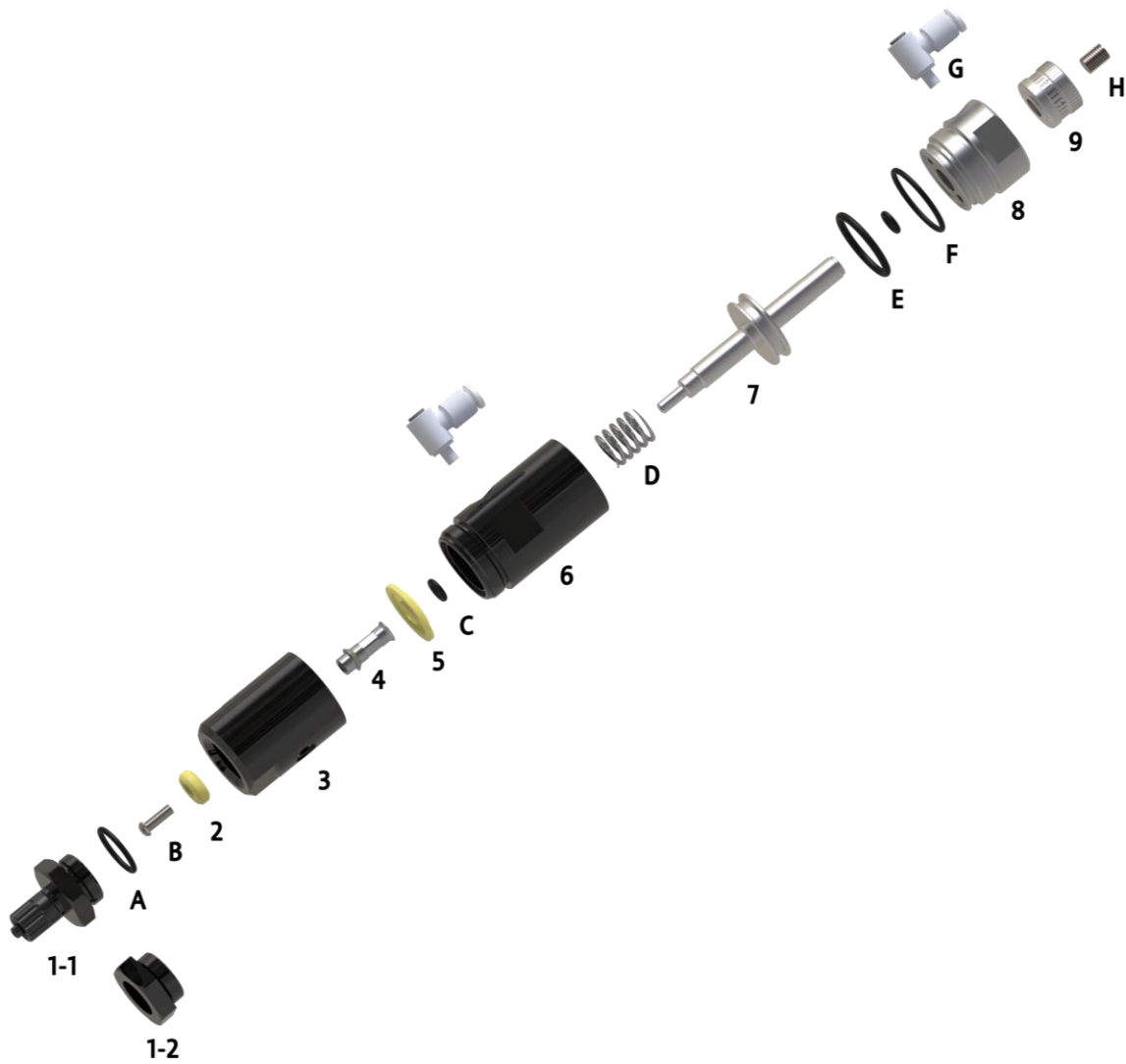


### 3.4 Notice for use

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- 1) If there are air bubbles between the valve material in port and out port, or if air bubbles are mixed in the material itself, the material's formation will be worse after discharge and the "ball-up phenomenon" will occur.(Sniff back effect ↓)
  
- 2) Be sure to proceed with the air bubble removal work before use.
  
- 3) After turning the needle end upward, set the shot pressure weak. Sufficiently shot the liquid continuously.  
If it is difficult to rotate the valve 180 °, reduce the shot pressure in that state and discharge continuously to dispense the liquid sufficiently.

## 4 Partlist



Part No.	Name	Q'ty	Material	Part No.	Name	Q'ty	Material
DV-300-1-1	Luer lock adapter	1	AL2011 + POM	DV-300-A	O-Ring(AS016)	1	FKM
DV-300-1-2	Chamber cap(option)	1	AL2011	DV-300-B	Truss head screw(M4x8)	1	SUS304
DV-300-2	Seat	1	UHMW-PE	DV-300-C	O-Ring(P8)	2	NBR
DV-300-3	Chamber	1	AL2011	DV-300-D	Spring	1	SUS304
DV-300-4	Rod	1	SUS303	DV-300-E	O-Ring(P21)	1	NBR
DV-300-5	Diaphragm	1	UHMW-PE	DV-300-F	O-Ring(AS020)	1	NBR
DV-300-6	Cylinder body	1	AL2011	DV-300-G	Air fitting(M5xØ4)	1	BRASS + ABS
DV-300-7	Piston	1	SUS303	DV-300-H	Set screw(M6x8)	1	SUS304
DV-300-8	Cylinder cap	1	AL2011				
DV-300-9	Adjust knob	1	AL2011				