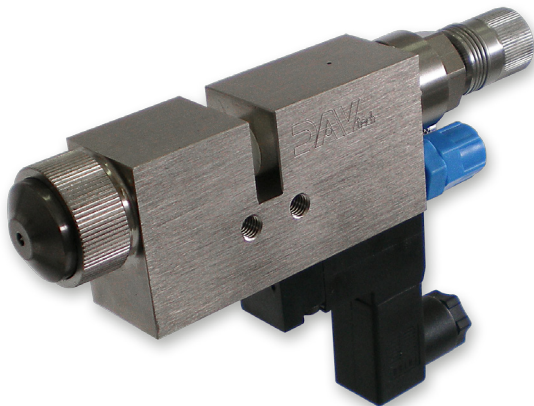


# Installation and maintenance guide



## SPRAY VALVE DAS 100 EV



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## 1 INTRODUCTION

### 1.1 The manual

The user guide is the document that accompanies the valve from the time of its construction and throughout the period of use, it is therefore an integral part of the valve. It requires reading the manual before taking any action involving the valve. The manual must be readily available for use by staff and maintenance of the valve. The user and the attendant use are required to know the contents of this manual.

Reproduction of any part of this manual, in any form, without the express written permission of DAV Tech. The text and illustrations in this manual are not binding, the DAV tech reserves the right, at any time and without notice, the right to make any changes to improve the product or for reasons of character manufacturing or commercial.

### 1.2 Warranty

The warranty is valid for a period of 12 months from the date of commissioning and no later than 15 months from the date delivery. The interventions carried out during the warranty period does not extend in any way the validity period of the guarantee. The seller is not liable for defects caused by normal wear of parts which by their nature are subject to wear.

### 1.3 Goods receiving

The original configuration of the valve must never be changed.

Upon receipt of the goods, check that:

- The packaging is intact
- The exact correspondence of the material ordered.

## 2 TECHNICAL DESCRIPTION

### 2.1 Valve Operation

The DAS 100 EV spray valve has been designed and built to be used in various applications. Its design and its versatility make it suitable for any application requiring the use of spraying valves. The DAS 100 EV valve is a low and medium viscosity fluid dispenser.

Sturdy and compact, it has the particularity of having nozzle and cap covered in anti-stick material.

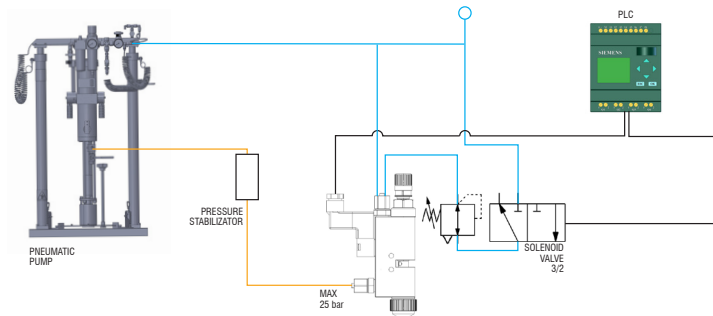
With appropriate gaskets it can be used for spraying solvent or acetate based adhesives.

### 2.2 Technical Specification

|                                 |   |
|---------------------------------|---|
| <b>Model</b>                    | DAS 100 EV                                      |
| <b>Operation</b>                | Single Acting - Double Acting                   |
| <b>Weight</b>                   | 490 g   |
| <b>Max fluid pressure</b>       | Max 25 bar                                      |
| <b>Actuating air pressure</b>   | 5 - 7 bar                                       |
| <b>Atomizing air pressure</b>   | 0,1 - 6 bar                                     |
| <b>Type air inlet</b>           | Hose 6x4mm 4x2, 5mm                             |
| <b>Fluid inlet thread</b>       | 1/8 gas   |
| <b>Air cap type</b>             | Oval or round                                   |
| <b>Speed</b>                    | Up to 200 cycles / min                          |
| <b>Adjusting of the passage</b> | Micrometric                                     |
| <b>Used materials</b>           | Stainless steel, nickel-plated brass            |
| <b>Fluids to be dispensed</b>   | Grease, oil, lubricants, primers, vinilic glues |

# Installation and maintenance guide

## 2.3 Connection diagram

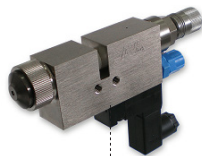


## 3 INSTALLATION

### 3.1 Mounting in the machine

The DAS 100 EV valve must be mounted using the fixing threaded holes on the valve.

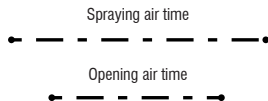
A good valve fixing on the machine must be guaranteed, stable without vibration and with good accessibility for adjustment, cleaning and maintenance.



Fastening hole

### 3.2 Drive the valve

The DAS 100 EV spray valve must be operated by two separate solenoid valves; a 3/2 way for the driving (mounted on the valve) and a 3/2 way (external) for the atomizing. The operating pressure must be between 5 and 7 bar. The atomizing between 0,1...2.5 bar. The atomizing air must be activated before and closed after the operating air, this to prevent the fluid remaining on the nozzle and on the cap.



### 3.3 Fluid connections

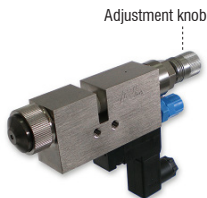
The valve must be connected to a fluid supply unit (pressure drum, diaphragm pump, pressure tank). The attack of the material for the tube is threaded 1/8 gas f.

### 3.4 Setting of the dispensed shot

Adjusting the needle stroke determines the amount of fluid dispensed.

#### > Micrometric adjustment version:

To adjust the travel, act on the adjustment knob at the top of the valve. Turn clockwise to decrease spike stroke and consequently the amount of product. Turning clockwise, reaching the end of the stroke the valve will be fully closed, so it will not flow fluid. Rotate counterclockwise to increase the stroke stroke and then the amount of fluid.



**Do not tighten the needle setting too firmly to avoid damaging the nozzle and needle.**

### 3.5 Setting of the material quantity

Adjusting the amount of material is determined by:

- > **Nozzle diameter (0.3 - 0.5 - 0.8 - 1.0 - 1.5)**
- > **Fluid pressure**
- > **Adjustment of the needle stroke**
- > **Opening time**

Acting on these factors, you can adjust the amount of material you want.

## 4 MAINTENANCE

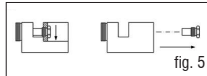
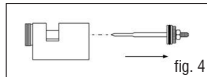
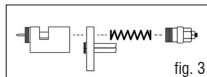
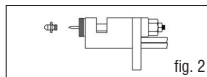
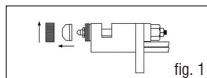
### 4.1 General rules

The DAS 100 EV spray valve, thanks to the construction methods and the materials used, are easy to maintain. Minimal, simple, accurate, and constant maintenance allow for long-lasting and smooth operation in valve time, while maintaining performance unchanged.

### 4.2 Valve Disassembly and re-assembly

Before disassembling the valve:

- 1) Wash the valve with water
- 2) Drain the pressure from the system
- 3) Remove the solenoid valve from the dosing body
- 4) Unscrew the adjustment block (Pos.17a - 17b) with a 17 mm wrench. Take care because the spring is pushing.
- 5) Unscrew the ring nut (Pos.3) and remove the air cap (Pos.1a - 1b)(fig.1)
- 6) Unscrew the nozzle (Pos.2) with a 6 mm wrench (fig. 2)
- 7) Remove the spring (Pos.15)
- 8) Carefully remove the fixing plate (Pos.16) complete with pipe holder and pipes (fig. 3)
- 9) With a narrow nose pliers pull off the needle (Pos.9)(fig. 4)
- 10) Unscrew the compass (Pos.7) with a 12 mm socket wrench and remove it from the body (fig. 5)
- 11) If necessary, remove the needle (Pos.9)



# Installation and maintenance guide

After having cleaned it thoroughly and replaced all the damaged parts (above all the seals and the scraper mounted under the compass). Reassemble in the reverse order of disassembly by lightly lubricating the parts and gaskets with mounting grease.

## 5 TROUBLESHOOTING

### 5.1 Problems and solutions

The search for defects in the operation should be performed only by personnel qualified respecting the safety rules in force.

| PROBLEM   | POSSIBLE CAUSE                                    | SOLUTION  |
|---|---|---|
| Nothing or little fluid                           | Valve does not receive the command                | Check valve (solenoid valve) control. Perform a manual test.    |
|   | The pressure of the fluid is too low or absent.   | Check the fluid supply pressure and, if necessary, increase it. |
|   | The nozzle is clogged                             | Unscrew and clean the nozzle.                                   |
|   | The filter is dirty (if present)                  | Wash or replace the filter.                                     |
|   | A tube is bent                                    | Check the status of the fluid supply pipes                      |
|   | Insufficient drive pressure                       | Check drive pressure (5...7 bar)                                |
|   | Fluid residues present in the system              | Clean the system with water                                     |
| Fluid out of the compass                          | O-ring or shaped gasket on the damaged valve body | Replace O-ring or shaped gasket                                 |
| Fluid flow between valve body and fixing plate    | O-ring on the damaged dam reservoir               | Replace the O-ring of the hub                                   |
| The nozzle dries even if the valve is not piloted | Presence of dirt in the nozzle                    | Clean or replace the nozzle.                                    |
| The valve opens late                              | Insufficient drive pressure                       | Check drive pressure (5...7 bar)                                |
|   | O-ring on the damaged spike                       | Replace the O-ring on the needle                                |
| Splashed irregularly                              | Insufficient spraying pressure                    | Check spraying pressure (0,1...2,5 bar)                         |
|   | Dirt in the air cap                               | Clean the air cap   |

## 5.2 Spray setting

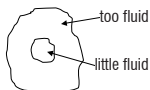
### **Dirty air cap: fluid flows from the nozzle**

- > Clean the air cap and the nozzle
- > Decrease the atomizing air

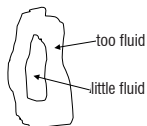
### **Too fluid**

- > Decrease the fluid pressure

Round cap



Oval cap



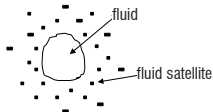
### **Irregular application: Insufficient misting air**

- > Increase the atomizing air pressure

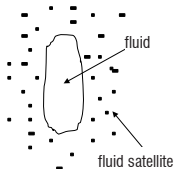
### **Poor amount of fluid**

- > Increase the fluid pressure

Round cap

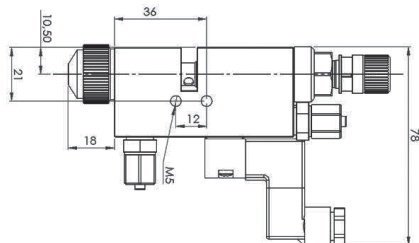
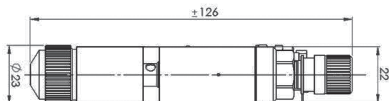
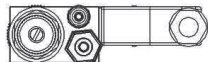


Oval cap

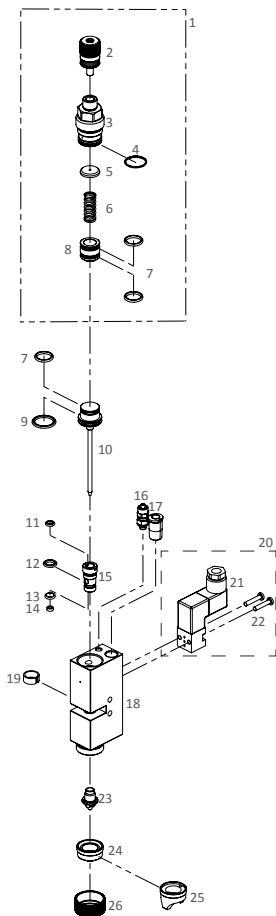


## 6 BREAKDOWN AND DIMENSIONS

### 6.1 Overall dimensions



## 6.2 Breakdown



## 6.3 Components

| POS   | CODE     | Q.TY | DESCRIPTION                         |
|---|----------|------|-------------------------------------|
| 1   | 34000001 | 1    | Complete micrometric regulation     |
| 2   | 31200003 | 1    | Adjustment knob                     |
| 3   | 34000002 | 1    | Adjustment block                    |
| 4   | 92011501 | 1    | O-ring                              |
| 5   | 83100108 | 1    | Adjustment washer                   |
| 6   | 93510901 | 1    | Spring                              |
| 7   | 92011001 | 3    | O-ring                              |
| 8   | 83100109 | 3    | Piston adjustment                   |
| 9   | 92011401 | 1    | O-ring                              |
| 10  | 841303XX | 1    | Needle                              |
| 11  | 92010202 | 1    | O-ring                              |
| 12  | 92010601 | 1    | O-ring                              |
| 13  | 92010401 | 1    | O-ring                              |
| 14  | 92320301 | 1    | Shaped gasket                       |
| 15  | 83100104 | 1    | Bushing                             |
| 16  | 95120402 | 1    | Drive air connection                |
| 17  | 95110102 | 1    | Drive air nebulization              |
| 18  | 34400001 | 1    | Valve body                          |
| 19  | 31000001 | 1    | Plastic protection                  |
| 20  | 82050201 | 1    | Complete solenoid valve 24VDC       |
| 21  | 96101111 | 1    | Solenoid valve connector            |
| 22  | 93362316 | 1    | Solenoid valve screw                |
| 23  | 857221XX | 1    | Nozzle                              |
| Replace the desired needle / nozzle diameter to the value XX<br>Needle / nozzle diameters available from 0.5 - 0.8 - 1.0 - 1.5 mm |          |      |                                     |
| 24  | 85792110 | 1    | Cappuccio aria rotondo 0,3 - 1,0 mm |
|   | 85792115 | 1    | Round air cap 1,5 mm                |
| 25  | 85792210 | 1    | Oval air cap 0,3 - 1,0 mm           |
|   | 85792215 | 1    | Oval air cap 1,5 mm                 |
| 26  | 85792001 | 1    | Bezel                               |
|   | 92911000 | 1    | Gasket kit                          |