

Installation and maintenance guide

DAVtech

DIAPHRAGM VALVE DA 250



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Index

1 INTRODUCTION	pag. 3
1.1 The manual	
1.2 Warranty	
1.3 Goods receiving	
2 TECHNICAL DESCRIPTION	pag. 3
2.1 Valve operation	
2.2 Technical specifications	
2.3 Connection diagram	
3 INSTALLATION	pag. 4
3.1 Mounting on the machine	
3.2 Drive the valve	
3.3 Fluid connection	
3.4 Setting of the valve	
3.5 Setting of the material quantity	
4 MAINTENANCE	pag. 6
4.1 General rules	
4.2 Valve Disassembly - Re-assembly	
5 TROUBLESHOOTING	pag. 6
5.1 Problems and solutions	
6 BREAKDOWN AND DIMENSIONS	pag. 7
6.1 Overall dimensions	
6.2 Breakdown	
6.3 Components	

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.

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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

DA250 dosing valve is designed and manufactured in compliance with current safety standards.

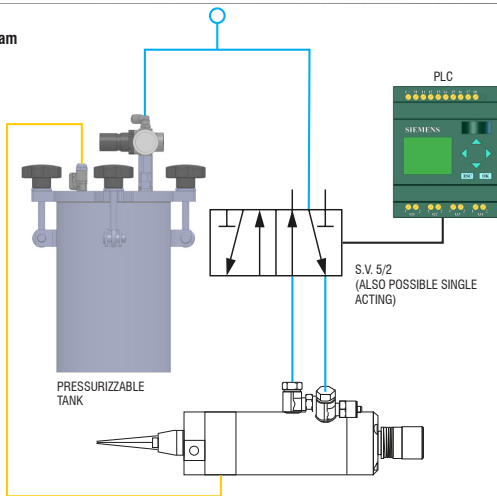
The DA250 should only be used for the application of anaerobic, cyanoacrylic or other aggressive fluids at a maximum pressure of 10 bar. Only qualified personnel are authorized to install and use the DA250 dispensing valve. Read and understand this manual before installing and using the valve. For the dosing valve DA250 only and exclusively the use fields listed in this manual are provided. All data and parameters in this manual must be respected. You can only use DAV Tech's additional or auxiliary equipment. Any other use is not contemplated.

2.2 Technical Specification

Model	DA 250
Drive	Simple or Double Acting
Max fluid pressure	10 bar
Operating pressure	5-7 bar
Thread inlet	1/8 BSP
Thread outlet	Luer Lock or others on request
Speed	Up to 200 cycles / min
Adjustment	Micrometric screw adjustment
Used materials	Anodized aluminum, stainless steel, PTFE, membrane co-molded with non-reactive materials
Fluids used	Cyanoacrylate glue, anaerobic fluids, low viscosity fluids in general (even aggressive)

Installation and maintenance guide

2.3 Connection diagram



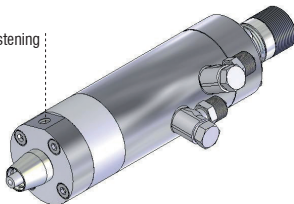
3 INSTALLATION

3.1 Mounting on the machine

The dosing valve must be mounted on a support by means of the special threaded hole (M5) on the valve, or by an ad-hoc collar.

A good fixing of both the dosing valve to the support and the machine should be guaranteed without vibration and with good accessibility for adjustment, cleaning and maintenance.

Threaded hole M5 for fastening :



The ideal working position of the dosing valve is the vertical one, with the nozzle facing down. Other positions are possible with the approval of DAV Tech

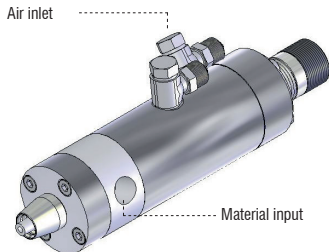
3.2 Drive the valve

The dosing valve DA250 is a dispensing valve that can work both in a simple and a double effect, as there is a safety spring that keeps the valve normally closed.

3.3 Fluid connection

The dispensing valve must be connected to a power supply unit (pressure tank).

A hose must be connected to the fitting located at the bottom of the dispensing valve.



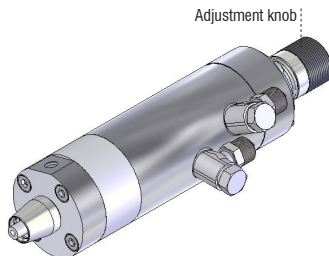
3.4 Setting of the valve

Adjustment of the membrane travel determines the amount of product delivered.

To adjust the stroke, act on the adjuster knob located at the top of the dispensing valve.

Rotate clockwise to decrease the membrane stroke and consequently the amount of product. Turning clockwise, reaching the end of the stroke, the dispensing valve will be completely closed, so it will not produce the product.

Rotate counterclockwise to increase the membrane stroke and then the amount of product.



Do not tighten the needle adjustment too firmly to avoid damaging the membrane.

3.5 Setting of the material quantity

Adjusting the amount of material is determined by:

- > **The diameter of the nozzle**
- > **Material pressure**
- > **Adjustment of membrane travel**

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

Installation and maintenance guide

4 MAINTENANCE

4.1 General rules

Minimal, simple, accurate, and constant maintenance allow for long-lasting and smooth operation in the dosing valve time, while maintaining performance.

4.2 Valve Disassembly - Re-assembly

If it is necessary to disassemble the DA 250 valve, proceed as follows:

- 1) Disconnect the pneumatic supply
- 2) Disconnect the fluid supply after discharge
- 3) Remove the valve from the support to which it is attached
- 4) Remove the four M4 Allen screws on the front
- 5) Remove the front part of the PTFE section and clean them carefully
- 6) Remove the membrane by unscrewing it
- 7) Remove the 4 screws on the back
- 8) Pull out the piston, making sure not to squeeze the cylinder

Before reassembling, following the procedure listed here replace the damaged parts (in addition to all the o-rings) by helping with the explosion shown below.

5 TROUBLESHOOTING

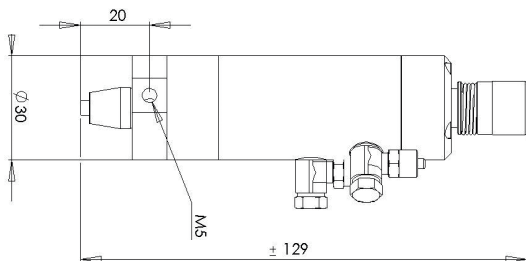
5.1 Problems and solutions

PROBLEM	POSSIBLE CAUSE	SOLUTION
Nothing or little adhesive	Valve does not receive the command	Check the control (solenoid) of valve. Perform a manual test.
	The pressure of the adhesive is too low or absent.	Check the pressure of the power supply fluid and possibly increase it.
	The nozzle is clogged	Remove and clean the nozzle.
	The filter is dirty (if any)	Clean or replace the filter.
	A tube is bent	Check the fluid supply pipe
	Actuating pressure is not sufficient	Verify the actuation pressure (6 bar)
	Residual fluid in the system to clean	Remove any solid particles
Flow of adhesive compass	Moulded gasket damaged	Replace the molded seal
The nozzle drips also if the valve is not pilot	Presence of dirt in the nozzle	Clean or replace nozzle
The valve opens late	Pressure drive is not enough	Check the operating pressure (6 bar)
	O-ring on the piston damaged tire	Replace O-ring on the piston pneumatic

6 BREAKDOWN AND DIMENSIONS

6.1 Overall dimensions

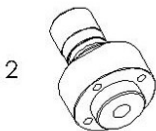
These are the indicative dimensions of the DA 250 valve. Download 3D models from our web-site.



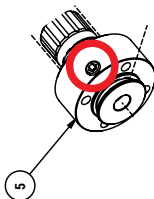
NOTE!

The "old" and "updated" versions differ in their external appearance due to the presence or absence of the dowel placed in the center of component no. 2 (old version) and no. 5 (updated version). On the following pages you will find the complete exploded views of both versions.

Old version

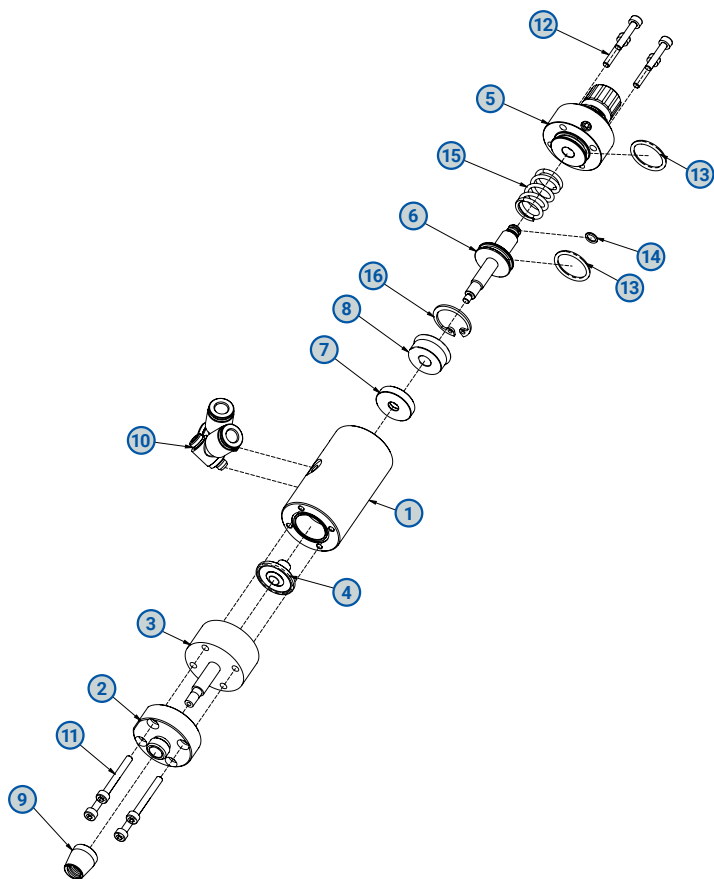


Updated version



Installation and maintenance guide

6.2 Breakdown



6.3 Components

Ref.	Description	Code
1	DA-250 VALVE BODY	0003.BG000450
2	FRONTAL BODY DA-250	0003.000451
3	TEFLON BODY DA-250	0003.25010
4	DIAPHRAGM DA-250	0003.DPH000450
5	REGULATION ASSY DA-250	0003.MDC000450
6	DA-250 PISTON	0003.PST000450
7	DA-250 PISTON	0003.WSH000450
8	LIP SEAL DA-250	0003.25004
9	LUER LOCK ADAPTER DA-250	0003.25008
10	90° AIR FITTING	0003.RRBF0252
11	SCREW DA-250	0003.00030251
12	SCREW DA-250	0003.00030161
13	O-RING	0003.000015E
14	O-RING	0003.040X10E
15	SPRING	0003.CCS000450
16	SEEGER DA-250	0003.501801
	DA-250 GASKET KIT	GASKETKIT-DA250

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We reserve the right to modify at any time, without notice, the specifications, dimensions and weights in this manual.
The illustrations are not binding.