



**GONANO**  
DOSIERTECHNIK GMBH

operating instructions  EN

## High pressure valve GV-1370



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## 1 General information

Dear Customer

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Thank you for purchasing the GV-1370.

These operating instructions are intended for simple and safe operation of the valve.

Please read these instructions carefully before commissioning and also observe the safety instructions given.

Your Gonano-Dosiertchnik GmbH.

### 1.1 The GV-1370

The dispensing valve is designed to accurately dispense medium to high viscosity dispensing media at a high flow rate.

Despite the high flow rate, the valve's compact design allows it to be used in automatic production lines and in confined spaces.

It consists of 3 basic bodies: cylinder, cylinder cover and material body. In the stainless steel version, all metal parts in contact with the medium are made of stainless steel.

In the rest position, the valve is closed. The valve piston is designed to create a material retraction when closing. The material inlet pressure has no influence on the operation of the valve.

The valve is closed by spring force.

Optionally, it can also be closed via auxiliary air.

### 1.2 Intended useage

The valve is designed and constructed for commercial use. It is only intended for dispensing liquid materials such as glue, paste, grease, oil, silicone and similar. Any other use is considered improper.

If this unit is used for any other purpose, personal injury or property damage may result.

The manufacturer accepts no liability for consequences arising from improper use.

#### Unintended use includes:

- Modifications to the unit and its components that are not expressly recommended in the operating instructions
- Use of incompatible or damaged spare parts
- Use of non-approved accessories or auxiliary equipment
- Exceeding the approved and recommended pressure values

## 2 Safety instructions

### 2.1 General safety information

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If this unit is used for other purposes, than described in these operating instructions, it may result in personal injury or damage to property. Only use the appliance in accordance with the operating instructions.



### 2.2 Dangers for the operator



Read the operating instructions carefully before use.

Always wear the appropriate protective clothing and eye protection.

Smoking or naked flames are prohibited when dispensing flammable media.

This appliance is intended for indoor use only.



### 2.3 Safety instructions for auxiliary and operating materials



For details regarding proper handling and safety precautions, refer to the safety data sheet of the dispensing material used.

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## 3 Commissioning

### 3.1 Valve setup

1. Mount the valve on the desired bracket
2. Connect the material line (1/4" NPT material inlet)  
The valve can be assembled in 90° steps
3. Connect the control air to the top of the valve (1/4" NPT connection)  
To open the valve a minimum of 3.5 bar is required
4. Apply pressure to the material line

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**Maximum 170 bar!**

5. Screw on a dispensing nozzle. Alternatively, you can also use a Luer-Lock adapter to connect dispensing needles.
6. Open the valve with your compressed air control until there is no more air in the material line. It may be helpful to hold the valve with the outlet pointing upwards.

### 3.2 Valve adjustment

The shot size and the bead width depend on the following factors:

- Control duration of the valve
- Material pressure
- Material viscosity
- Dispensing needle diameter and type

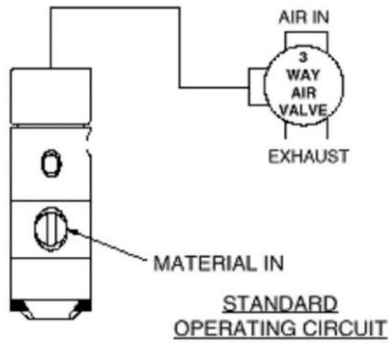


When the valve closes, the material is drawn back into the dispensing needle to reduce dripping of the dispensing medium.

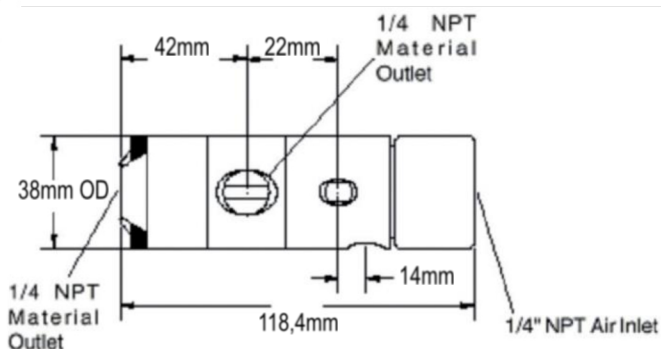
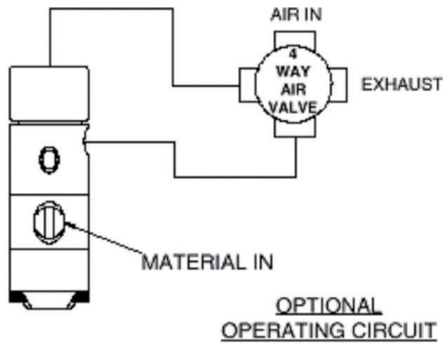
**IMPORTANT**

### 3.3 3/2 way control

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### 3.4 5/2 way control





## 4 Maintenance

### 4.1 Demontage

1. First flush the valve with conditioner and disconnect the material line.
2. Disconnect the control air and, if necessary, the auxiliary air
3. Unscrew the end cap (14)
4. Unscrew the 4 retaining screws (1)
5. Take the material outlet block (2), material inlet block (5) and Cylinder (6) apart
6. Push out the valve piston (8+10)
7. Remove the seals (4) and the O-rings (3,9,13). Note the installation position of the seal

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### 4.2 Assembly

1. Insert the O-ring (3) into the material outlet block (2) and the cylinder (6)
2. Insert the seals (4) into the material outlet block (2) and the cylinder (6)



The seals must be installed in the same way as the old seals were removed!

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3. Reassemble the material outlet block (2), material inlet block (5) and the cylinder (6)
4. Screw everything together again with the screws (1)
5. Put the O-ring (9) on the valve piston (8)
6. Place the seal (11) on the piston (10)
7. Screw the piston rod (8) back onto the piston (10) (if previously disassembled). Pay attention to the correct position of the piston (10) !
8. Insert the spring (7) into the cylinders (6)
9. Push the valve piston back into the valve body
10. Insert the O-ring (13) into the end cap (14)
11. Screw the end cap (14) onto the cylinder (6)

## 5 Troubleshooting

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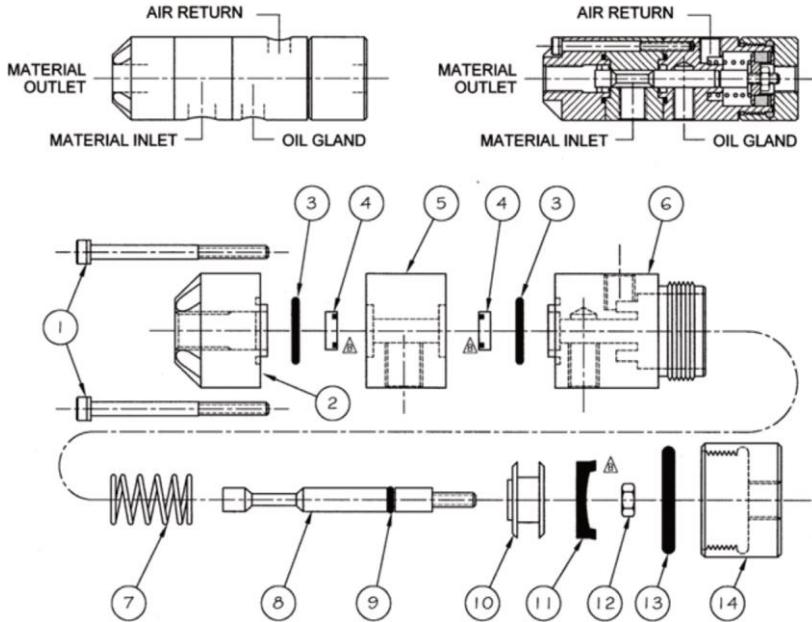
Problem	Possibilities
No material flow	Material pressure is too low - Increase Operating pressure is too low - Increase Material has deposited in the valve seat - Clean valve
No constant material flow	Operating pressure fluctuates Material pressure fluctuates Air is in the valve - valve must be vented Dispensing time is too low for the control of the valve - Increase dispensing time
Material continues to flow even though the valve is closed. It may stop flowing after some time.	Air is in the valve - valve must be vented Air is in the material itself - Degas / evacuate material Material has deposited in the valve seat - Clean valve
Constant Dripping	Seal is worn - Replace Valve may not have been assembled correctly after cleaning - Disassemble again and reassemble. Material pressure is over 170 bar - Reduce pressure Control air is not vented properly - Check valve actuation Closing spring missing or defective - Check / replace Valve does not close properly - Change to 5/2 way control



## 6 Spare parts

### 6.1 Spare parts for the GV-1370

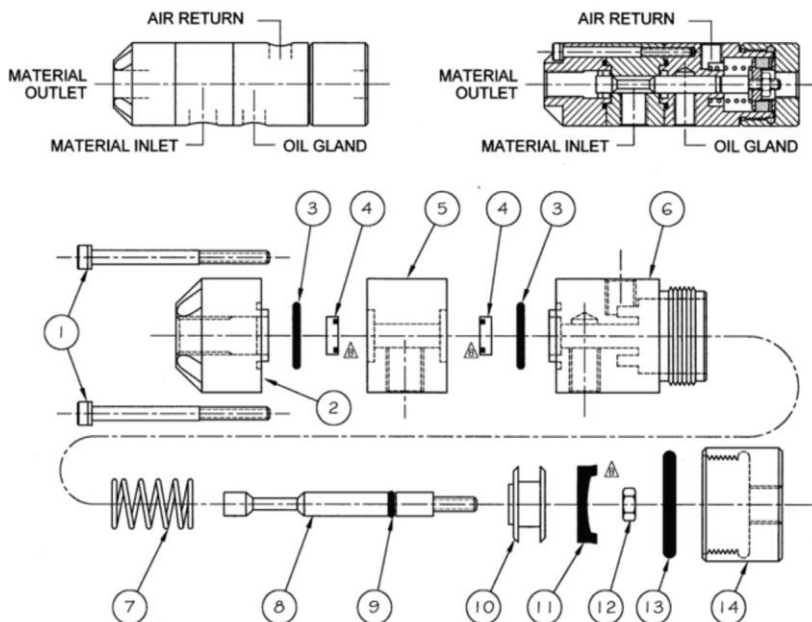
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No. in fig.	Item no.	Description	Quantity	Consisting of
1		Screw M5 x 60 stainless steel	4	
2	501752	Material outlet block	1	
3	501758	O-ring	1	
4a	501755	Seal for all media	2	
4b	501756	Seal for medium to high viscosity media	2	
5	501749	Material inlet block	1	
6	501745	Cylinder	1	
7	501762	Spring	1	
8	501748	Valve piston	1	
9	501760	O-ring	1	
10	501742	Reciprocating piston	1	
11	501763	Seal	1	
12	501765	Self-locking nut	1	
13	501764	O-ring	1	
14	501744	End cap	1	
	501767	Repair kit without valve piston		3, 4, 9, 11, 13
	501766	Repair kit with valve piston		3, 4, 8, 9, 11, 13

## 6.2 Spare parts for the GV-1370SS (stainless steel version)

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No. in fig.	Item no.	Description	Quantity	Consisting of
1		Screw M5 x 60 stainless steel	4	
2	501753	Material outlet block	1	
3	501758	O-ring	1	
4a	501755	Seal for all media	2	
4b	501756	Seal for medium to high viscosity media	2	
5	501750	Material inlet block	1	
6	501746	Cylinder	1	
7	501761	Spring	1	
8	501748	Valve piston	1	
9	501760	O-ring	1	
10	501742	Reciprocating piston	1	
11	501763	Seal	1	
12	501765	Self-locking nut	1	
13	501764	O-ring	1	
14	501744	End cap	1	
	501767	Repair kit without valve piston		3, 4, 9, 11, 13
	501766	Repair kit with valve piston		3, 4, 8, 9, 11, 13

## 7 Disposal

At the end of its service life, dispose of the product in accordance with the applicable legal requirements.

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Electrical parts must not be disposed of with household waste.

According to Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE), these must be handed in at the collection points set up for this purpose in order to be recycled.

## 8 Technical data

Size	118.4 mm long, Ø 38 mm
Weight approx	520 g (stainless steel 750 g)
Material inlet	¼" NPT
Material outlet¼	¼" NPT
Max. Material pressure	170 bar
Compressed air inlet¼	¼" NPT
Min. operating pressure	3.5 bar
Parts that come into contact with dosing material:	Anodised aluminium, PTFE seals, stainless steel piston

In the stainless steel version, GV-1370 SS, all metal parts in contact with the medium are made of stainless steel.

### 8.1 Dispensing data for water

Smallest shot size	0,14 ml
Flow rate at 100psi	39.000 ml / minute
Switsch frequency	600 Zyklen / minute
Material viscosity	up to 3 Mio. mPas



**GONANO**  
DOSIERTECHNIK GMBH

GONANO Dosiertechnik  
GmbH  
Franzensdorfer Straße 40  
A-2285 Breitstetten

Phone: +43 2216 8478  
Fax: +43 2216 8477

E-mail: [office@dosieren.net](mailto:office@dosieren.net)  
Internet: [www.dosieren.net](http://www.dosieren.net)