

# AL, ALM Series

Automatic filling valve

## Technical Data Sheet



## Description

**AL-ALM Series** ALIMAT valves consist of a pressure reducing valve, a filter, a shut-off valve and a check valve, and are designed for automatic filling of heating systems with open or closed expansion vessel.

### AL

#### ALIMAT

Automatic filling valve complete with check valve, manual shut-off, stainless steel filter and vent screw. CW617N brass body. Impact-resistant plastic cap.  
1/4" F pressure gauge connection. Max. upstream pressure: 10 bar.  
Adjustable downstream pressure: 0.3÷4 bar.



Type	Part No.	DN	Weight (g)
AL	0240100	1/2" MF	550

### ALM

Automatic filling valve complete with check valve, manual shut-off, stainless steel filter, vent screw and **pressure gauge with bottom connection and 50 mm dial, scale 0÷4 bar**. CW617N brass body. Impact-resistant plastic cap. 1/4" F pressure gauge connection. Maximum upstream pressure: 10 bar. Downstream pressure: 0.3÷4 bar.



Type	Part No.	DN	Weight (g)
ALM	0240200	1/2" MF	600

#### Technical features

Maximum inlet pressure	10 bar
Pressure setting	0.3÷4 bar
Maximum flow rate	1.8 m <sup>3</sup> /h
Operating sensitivity	0.2 bar
Maximum fluid temperature	40°C
Pressure gauge connection	1/4" F

#### Materials

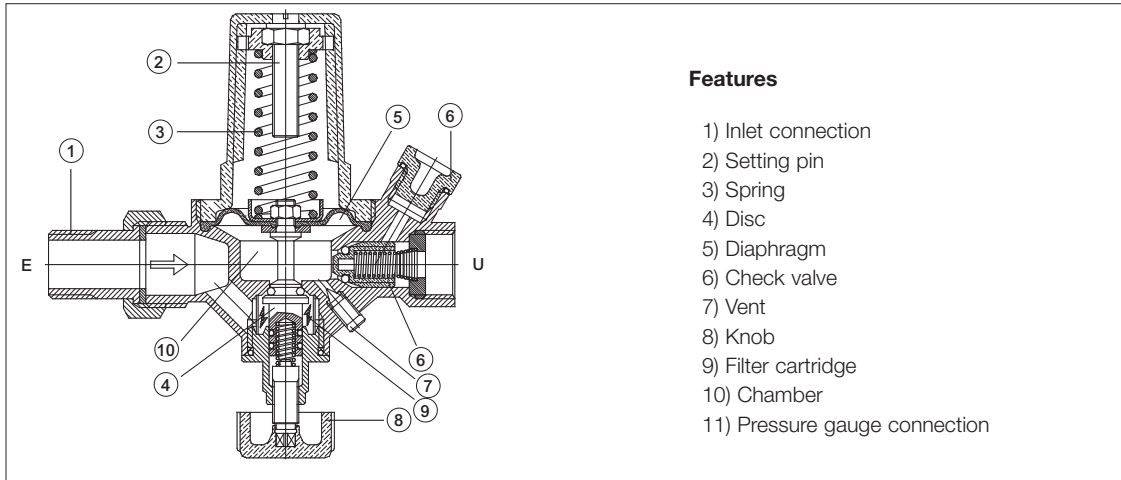
Body	CW617N
Diaphragm	Nylon-reinforced NBR
Seal rings	NBR
Cap	impact-resistant plastic

## Application

When fitted between the mains water supply and the heating system, **ALIMAT** filling valves quickly and automatically replace any water lost from the system, and keep the downstream pressure stable at a set operating value. The valves are equipped with a manual shut-off valve at the bottom, for shutting off the water supply to the system. A check valve built into the body prevents possible backflow, which could otherwise contaminate the mains water supply.

## Operation

When the pressure exerted by the fluid in the system drops below the pressure that spring (3) of the **ALIMAT** filling valve exerts on membrane (5), the spring pushes disc (4) down. The mains water enters via inlet (E), flows through filter cartridge (9), rises into chamber (10), opens check valve (6) and flows into the system (U). When filling is complete, the pressure in the system, and hence in chamber (10), increases. Once the pressure exceeds the force exerted by the counter-spring, it pushes diaphragm (5) up, causing disc (4) to close. Check valve (6) prevents backflow. The pressure therefore settles at the value dictated by the setting of the spring.



**Features**

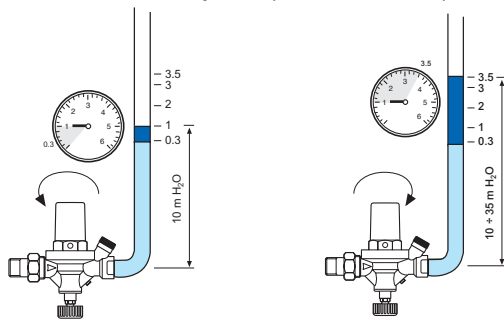
- 1) Inlet connection
- 2) Setting pin
- 3) Spring
- 4) Disc
- 5) Diaphragm
- 6) Check valve
- 7) Vent
- 8) Knob
- 9) Filter cartridge
- 10) Chamber
- 11) Pressure gauge connection

## Setting

To set the **ALIMAT** automatic filling valve, turn screw (2):

- Towards + (clockwise) = to increase the pressure;
- Towards - (anticlockwise) = to reduce the pressure.

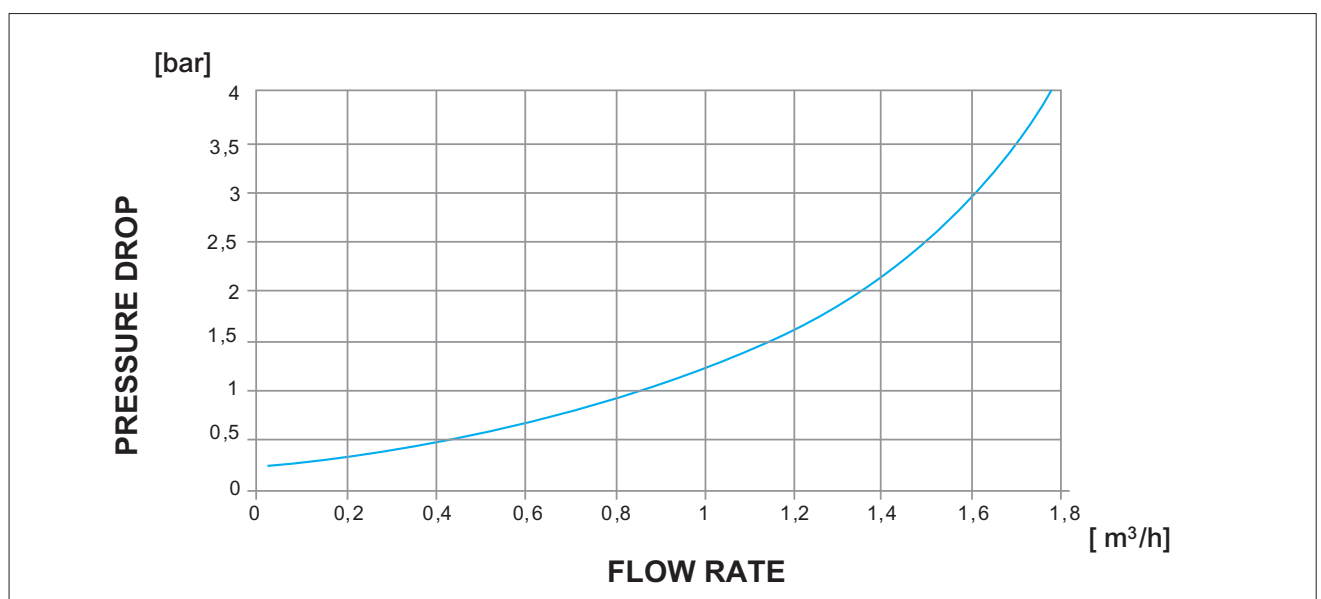
You can check the system pressure on the pressure gauge.



## Checking the pressure tightness of the check valve

To check the pressure tightness of the check valve in the **ALIMAT** automatic filling valve, proceed as follows. Close the shut-off valve (gate valve), unscrew the vent screw (7) by 2 or 3 turns: if the check valve is not pressure tight, water will leak through it continuously. Once you have completed the check, fully re-tighten the vent screw and re-open the shut-off valve.

## Charts

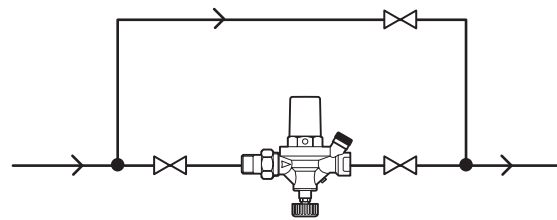


## Installation

**ALIMAT** filling valves must be installed according to the direction of the arrow stamped on the valve body. The valve can be installed either vertically or horizontally but avoid positioning the valve upside down as this could cause debris to accumulate on the diaphragm over time, reducing its sensitivity to small pressure variations.

For quicker filling, make sure the regulating valve is fully open, although it is advisable to introduce the water slowly enough to avoid the formation of air pockets, which are difficult to expel.

When filling, the device ensures that all water supplied from the mains is filtered. To prevent uncontrolled flows of water into the system, which would prevent leak detection, you are advised to close the shut-off valve after filling. The pressure gauge will indicate any leaks, which, if continuous, must be promptly identified and eliminated. You are advised to install a bypass on the filling valve in order to shorten filling times and facilitate maintenance.



Installation diagram

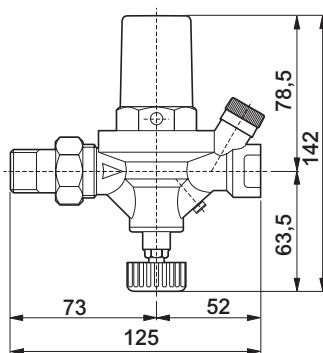
## Maintenance

Maintenance of the **ALIMAT** automatic filling valve is limited to the periodic cleaning of the filter, particularly after filling the system for the first time. To remove the filter, proceed as follows:

1. Close the gate valve upstream of the **ALIMAT** valve (if there is no gate valve, shut off the supply pipe from the mains)
2. Unscrew the bottom nut and remove knob assembly (8) where filter (9) is seated
3. Flush the filter with water (do not use aggressive chemicals)
4. Grease the O-rings fitted on disc (4)
5. Refit the filter and spring in the seat of the bottom nut, then fully re-tighten the nut to the body
6. Re-open the gate valve upstream of the **ALIMAT** valve or the valve upstream of the system

## Overall dimensions (mm)

### AL-ALM



## Specification text

### AL Series

Automatic filling valve ALIMAAL **Series** – WATTS brand – complete with check valve, manual shut-off, stainless steel filter and vent screw. CW617N brass body. Impact-resistant plastic cap. 1/4" F pressure gauge connection. Maximum upstream pressure 10 bar. Adjustable downstream pressure 0.3÷4 bar.

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Watts Industries Italia S.r.l.

Via Brenno, 21 • 20853 Biassono (MB) • Italy

Tel. +39 039 4986.1 • Fax +39 039 4986.222

[infowattsitalia@wattswater.com](mailto:infowattsitalia@wattswater.com) • [www.wattsindustries.com](http://www.wattsindustries.com)