



# Automatic Filling Group

## ▶ GA 00 - GA 00 SM

Adjustable automatic filling group with/without pressure gauge, complete with shut-off valve, filter and check valve; piston operation.

### ■ INTRODUCTION



During normal operation of a heating system, the internal pressure decreases due to the release of gases dissolved in the water through any deaerators and vents installed, or after bleeding of the heating units.

When the pressure drops too much, the heat generator will shut down until the correct operating pressure is restored. Thanks to the automatic filling unit, this operation does not require the intervention of a technician. The device is connected on one side to the mains water supply, and on the other to the heating system. **When the pressure on the system side falls below the calibration value, the filling unit automatically draws water from the mains supply for topping up.**

A check valve integrated in the device prevents inversion of the two flows in the event of a decrease in the pressure on the supply side. The filling unit also incorporates a pressure reducer, a 500 µm metal mesh strainer to prevent the entry of impurities into the heating system, and a shut-off valve to pause its operation.

### ■ BENEFITS

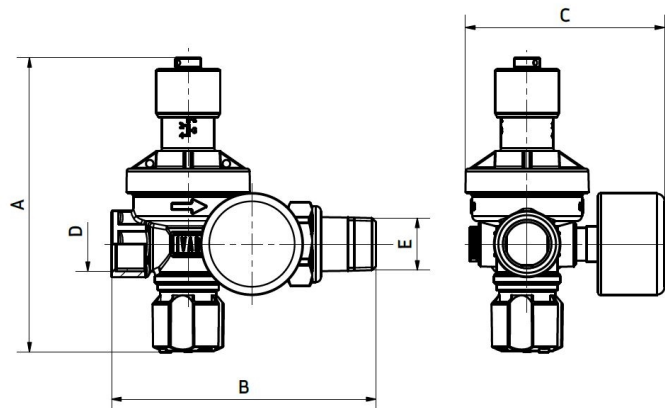
✓	Automatic filling without operator intervention
✓	System pressure always close to calibration pressure
✓	Safety

### ■ TECHNICAL DATA

Compatible fluid	Drinking water
Maximum inlet pressure	16 bar
Outlet pressure regulation	0.5 - 4 bar
Factory setting	1.5 bar
Maximum operating temperature	65 °C

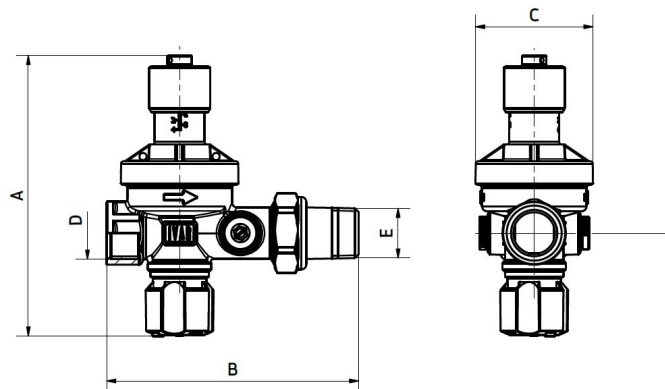
## DIMENSIONS

GA 00



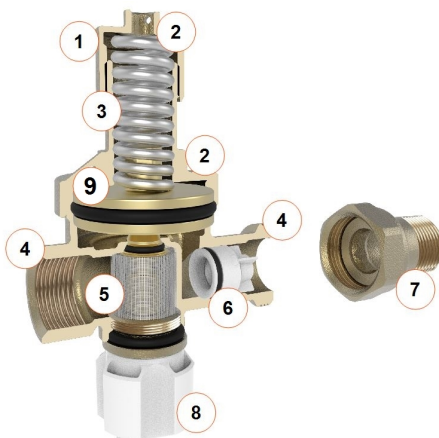
Art.	Cod.	A	B	C	D	E
GA 00	509000	116-123	104	80	G1/2	G1/2

GA 00 SM



Art.	Cod.	A	B	C	D	E
GA 00 SM	509000SM	116-123	104	49	G1/2	G1/2

## COMPONENTS



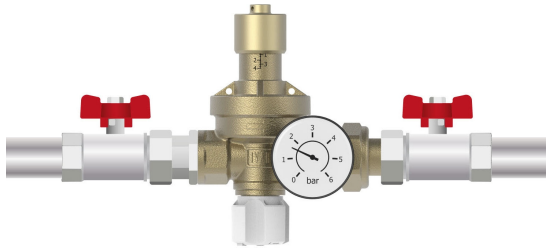
1. Outlet pressure regulation knob
2. Hole for lead meter seal
3. Internal pre-charge spring
4. Connections to system
5. Metal mesh strainer safety filter, 500 µm
6. Check valve
7. Connecting swivel union
8. Manual shut-off valve knob
9. Guided plate

## ■ INSTRUCTIONS AND WARNINGS

GA 00 and GA 00 SM must be fitted by a qualified plumber. Carefully read the installation requirements and instructions in this document before installing or performing maintenance on the component.

For correct system operation, it is always advisable to install an additional filter upline of the system, at the connection to the mains water supply.

## ■ INSTALLATION AND COMMISSIONING



Normally, automatic filling group are installed between two shutoff valves as shown in the figure.

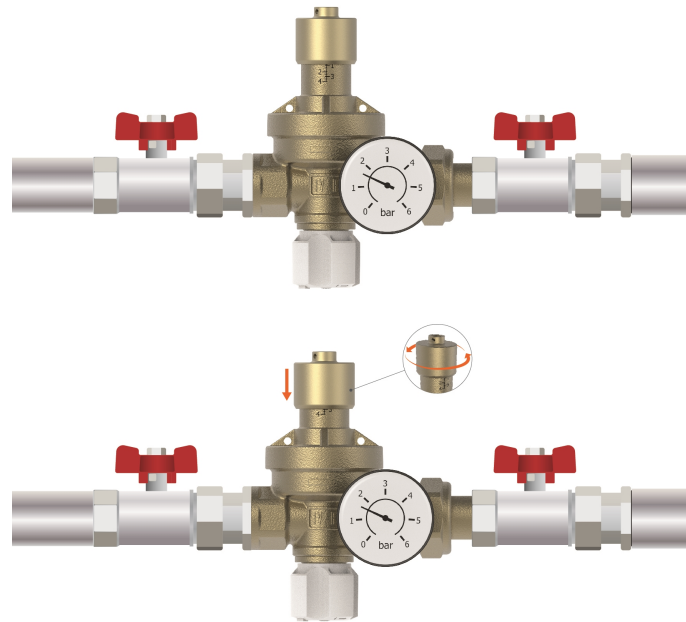
During maintenance and replacement of the filter, the shutoff valves are closed.

GA 00 and GA 00 SM can be installed on vertical or horizontal pipework; ensure that the direction of flow indicated on the valve is followed.



The factory setting of the output pressure of the automatic filling group is 1.5 bar. During the commissioning phase, it is possible to set an outlet pressure which is no less than the hydrostatic pressure of the system, increased by a safety factor of around 0.3 bar.

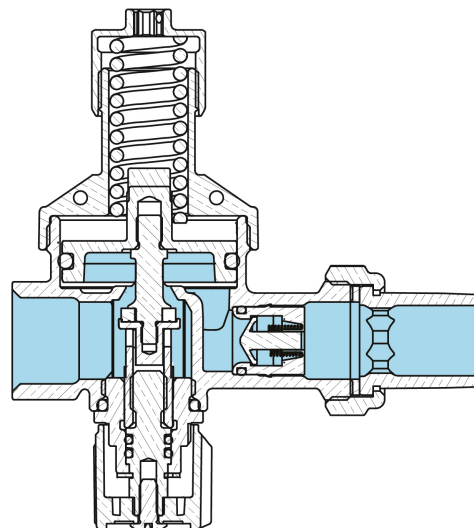
## ■ REGULATION



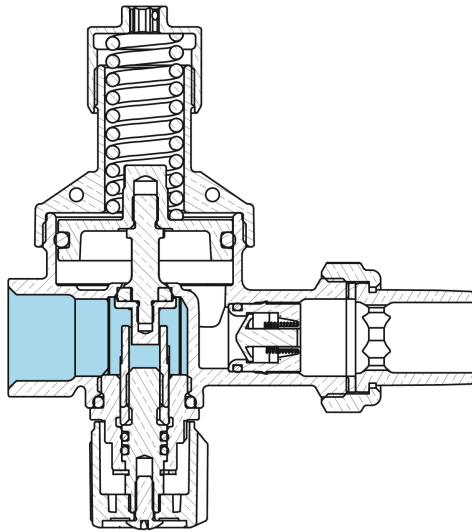
The outlet pressure is factory calibrated to 1.5 bar. The outlet pressure can also be regulated after the unit has been installed. Use the Allen key on the outlet pressure regulation knob and turn the knob to the right to increase the pressure, or to the left to decrease it. The pressure value can be read on the pressure gauge installed on the automatic filling group (GA 00 version only).

## ■ OPERATION

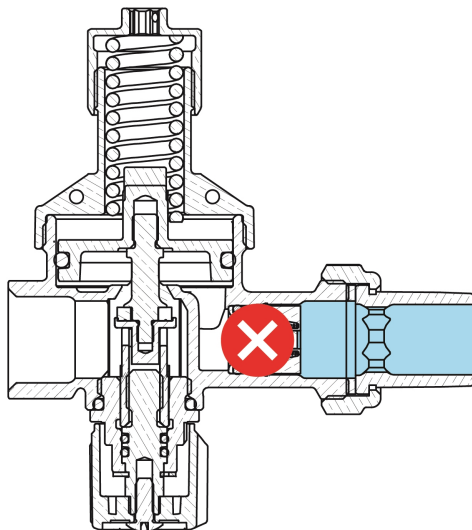
Once the automatic filling group has been commissioned, the water from the mains supply enters the system from downline of the device, which charges the system until the required pressure (set on the adjustment knob) has been reached.



When the system reaches the required pressure, the shutter closes and prevents the inlet of further water.



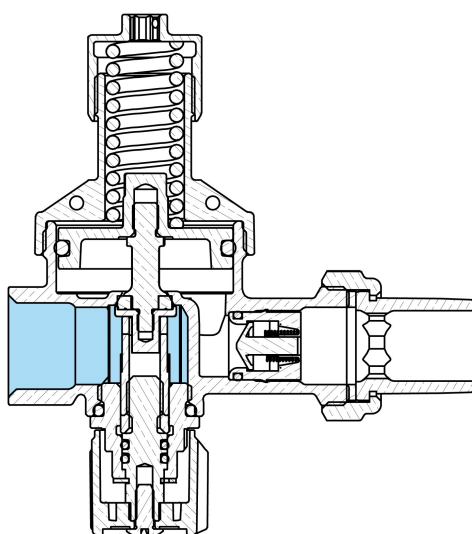
The check valve prevents backflow from the system into the mains.



When the system pressure falls below the calibration value, the filling unit automatically tops up the water until it reaches the required value.

#### Manual closing

GA 00 and GA 00 SM are equipped with manual shut-off valves with a white knob which can be operated when it is necessary to pause automatic filling of the system. To stop/pause system filling, turn the white knob to the right.



## ■ MAINTENANCE

Use the following procedure for scheduled cleaning or replacement of the filter inside the automatic supply unit:

1. Use the shutoff valves upline and downline of the unit to isolate it from the rest of the system.
2. Remove the knob from the manual shut-off valve, first removing the screw holding it in place.
3. Remove the internal shut-off cartridge and remove the metal mesh strainer.
4. Rinse or replace the filter and reinsert it in the filling unit.
5. Refit the cartridge and the knob which adjusts it and tighten with the previously removed screw.
6. Adjust the outlet pressure adjustment knob (if not previously lead sealed) and set the required pressure value for the system again.

## ■ SPECIFICATION SUMMARY

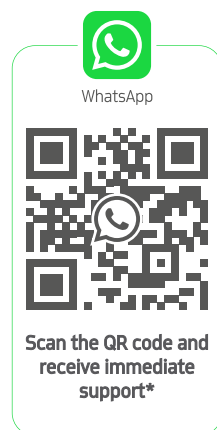
509000	Adjustable automatic supply unit with pressure gauge, complete with shut-off valve, filter and check valve; piston operation. Compatible fluid: drinking water. Maximum inlet pressure: 16 bar. Outlet pressure regulation: 0.5 - 4 bar. Factory setting: 1.5 bar. Maximum operating temperature: 65 °C.
509000SM	Adjustable automatic supply unit without pressure gauge, complete with shut-off valve, filter and check valve; piston operation. Compatible fluid: drinking water. Maximum inlet pressure: 16 bar. Outlet pressure regulation: 0.5 - 4 bar. Factory setting: 1.5 bar. Maximum operating temperature: 65 °C.

## ■ CODES

Line	Code	Main connections	Range	Maximum pressure	Factory calibration
GA 00	509000	1/2" M x 1/2"F	0.5 - 4 bar	16 bar	1.5 bar
GA 00 SM	509000SM	1/2" M x 1/2"F	0.5 - 4 bar	16 bar	1.5 bar



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