

Field of application

The Backflow Preventer 6600 BA Mini (or RPZ Valve) is designed to protect potable water against non potable water up to and including fluid category 4 in compliance with EN 1717. According to the instructions in the national annex to EN 1717 dealing with the selection of safety devices, the use of a BA Backflow Preventer is compulsory for the following appliances and draw-off points in domestic and non-domestic systems.

- Softeners / ion exchangers, regeneration
- Swimming pools and bathtubs with water treatment
- Bath lifters, openings and operational parts above bath rim
- Galvanic bath
- Sterilizing of water through disinfection
- Chemical mixing facilities (disinfectants or fertilizers)
- Chemical cleaning system
- Film developers
- Printing, reprographics, photographic equipment
- Filling system for heating installations (water with inhibitors)
- High pressure cleaners with addition of chemical substances
- Laboratory benches, chemical laboratories
- Softeners / Ion exchangers, formalin disinfection

Design

The BA Backflow Preventer is designed as follows:

- Casing
- Integral strainer, mesh width about 0.25 mm
- Cartridge with integral check valve and drain valve
- Check valve at the outlet
- 3 ball valves to connect a differential pressure gauge
- Threaded unions
- Drain connection
- Available with or without stop valves

Materials

- Body made of gunmetal
- Cartridge of high-quality synthetic material
- Check valve made of high quality synthetic material
- Ball valves made of brass
- Sealing elements made of NBR and EPDM
- Internal parts of high quality synthetic material / brass
- Drain connection of high quality synthetic material

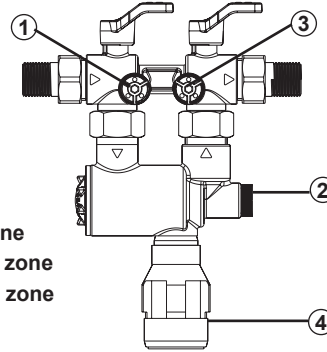
Technical specifications

Connection:	R 1/2" + 3/4"
Nominal size:	DN 15
Medium:	potable water
Upstream pressure:	max. 10 bar
Min. inlet pressure:	1,5 bar
Mounting position:	horizontal, drain facing downwards
Service temperature:	max. 65 °C
Drain pipe connection:	DN 40
Flow rate:	2,0 m³/h, Δp 1,5 bar

Function description

The BA Backflow Preventer (Reduced Pressure Zone Valve) from SYR includes all components set by EN 1717 and is designed as 3 pressure-zone-system with a controllable upstream, intermediate and downstream pressure zone. Each pressure zone is equipped with ball valves allowing to check each zone and to ensure the leaktightness of the safety devices by pressure measurement. The BA Backflow Preventer is equipped with 2 consecutive check valves with an intermediate pressure zone in between, which can be vented to the atmosphere. When no water is drawn off, the check valves on either

side and the drain valve are closed. In case of back-siphonage, the inlet pressure drops. The drain valve opens at the latest, when the differential pressure between the upstream and intermediate zone decreases to 0.14 bar. An optical indicator allows quick and easy verification of the Backflow Preventer's status.



- ① Upstream pressure zone
- ② Intermediate pressure zone
- ③ Downstream pressure zone
- ④ Tundish

Installation

Thoroughly flush the pipe prior to installation. When using the model without shut-off valves, service valves shall be provided either side of the Backflow Preventer. Mount the device in the pipe with the drain valve facing downwards to ensure a perfect operation of the tundish. Free access to the Backflow Preventer shall be provided to facilitate maintenance works and the inspection. Do not install the device in locations liable to frost and flooding. It should only be mounted in a well-ventilated environment. The drain pipe's diameter shall be able to accommodate the maximum discharge volume. We recommend installing a potable water filter according to EN 13443, part 1 upstream of the Backflow Preventer in order to ensure its perfect and durable operation. Once installed, vent the device by means of the 3 ball valves. Then, the Backflow Preventer is ready for operation.

When connecting the tundish to the sewer, comply with the requirements set in the standard EN 12056.

Only when designed with a synthetic body:

Use the enclosed adaptor when mounting a pressure gauge or a test port on the backflow preventer's pressure gauge connection for maintenance purposes, otherwise the synthetic body might become damaged by a possibly sealed manometer.

Remove the manometer plug (2), fit the pressure gauge in the adaptor and then screw the adaptor with the manometer in the body until hand-tight. Any R 1/4" pressure gauge can be used for the connection of a manometer to the adaptor.

Caution: Do not seal the adaptor!

Maintenance

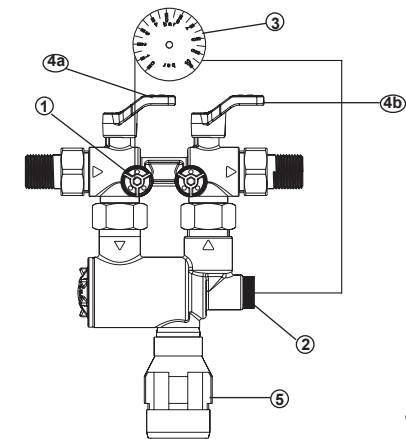
According to EN 1717, the Backflow Preventer has to be serviced on a regular basis. Therefore maintenance agreements between user and installer are very useful. The correct function has to be verified after the first service year and then periodically in accordance with the operating conditions, but every year at the latest. The ball valves in each pressure zone allow to check the correct operation of the valve by means of the pressure gauge (accessories; service kit art. no 6600.00.902). The Backflow Preventer is designed with a cartridge system, which makes the regular maintenance works simple and unproblematic.

Isolate the system and the potable water Mains by means of the shut-off valves upstream and downstream of the Backflow preventer and depressurize the system. Unscrew the Top of the BA-cartridge by using the maintenance key and remove the cartridge. Unscrew the two threaded connections above the system separator. Extrude the strainer upwards out of the inlet connection of the Backflow preventer. Rinse the removed Parts under clear, running water. After the reassembly Open both isolating valves.

Verification of the disconnection of the discharge valve and the secondary check valve

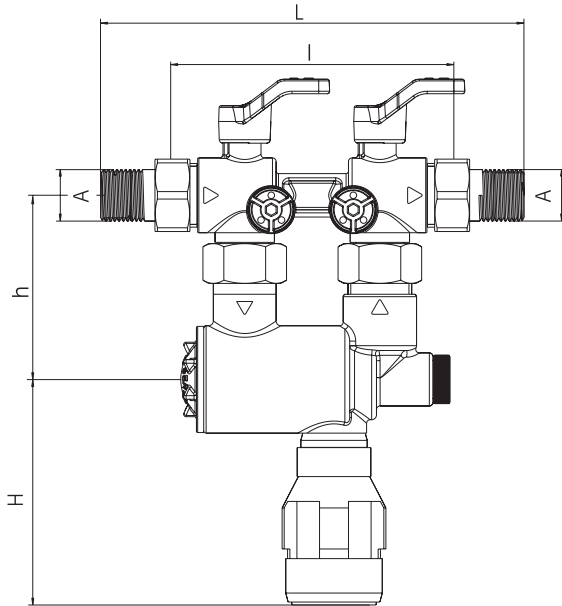
- To check the discharge valve, close both shut-off valves 4a + 4b.
- Remove the manometer plugs at the service valves 1+2. Attention: For the synthetic version please use the adapter.
- Open the service valves 1+2 to depressurize the device.
- Mount the pressure gauge's needle valves on the service valves 1+2.
- Fit the pressure gauge.
- Open both shut-off valves 4a + 4b.
- Vent the device by means of both needle valves. Close them again.
- Close the shut-off valves 4a + 4b.
- Relieve the pressure slowly by means of the needle valve 1.
- Watch the tundish. When the first drop comes out of the tundish, the diff. pressure shall exceed 140 mbar. If it is not the case, dirt has accumulated in the device or there is a mechanical defect.
- Open the needle valve 1 and discharge the intermediate pressure zone until completely drained.

- To verify the secondary check valve (RV2), open the outlet shut-off valve (4b). Should water drip from the tundish, there is probably a mechanical defect or dirt has accumulated in the secondary check valve.
- Close both service ball valves 1+2.
- Remove the measuring device and put the manometer plugs back in their position on the service valves.
- Open both shut-off valves (4a + 4b).



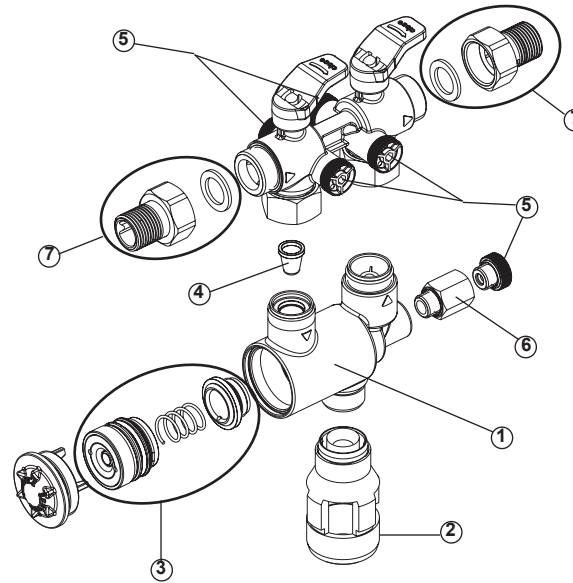
- ① service valve inlet pressure zone
- ② service valve intermed. press. zone
- ③ pressure gauge
- ④a primary stop valve
- ④b secondary stop valve
- ⑤ drain valve

Dimensions



Nominal size		DN 15	DN 15
	A	R 1/2"	R 1/2"
Dimensions	L (mm)	175	175
	l (mm)	117	117
	H (mm)	93,5	93,5
	h (mm)	76	76

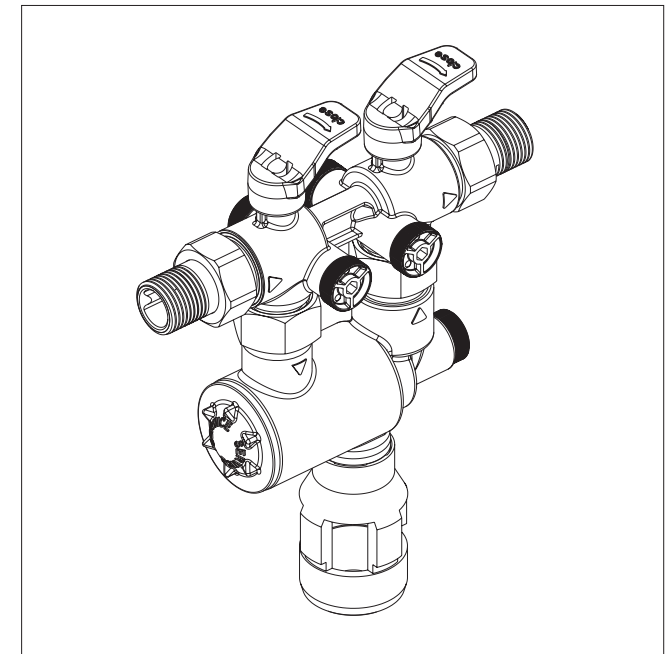
Spare parts



- | | | |
|---|--|---------------------------|
| ① | Body (synthetic): | 6600.00.919 |
| | Body (metal): | 6600.00.920 |
| ② | Tundish: | 6600.00.903 |
| ③ | Cartridge: | 6600.00.963 |
| ④ | Strainer: | 6600.00.922 |
| ⑤ | Plug: | 0828.08.000 |
| ⑥ | Adapter (only synthetic-version): | 6600.00.918 |
| ⑦ | Threaded unions: | R 1/2" 0812.15.900 |
| | | R 3/4" 0816.20.900 |



Instructions for use



Backflow Preventer 6600D BA Mini

WARNING

Only qualified installers are authorized to mount and service the device. Follow the maintenance instructions! The warranty does not cover malfunctions caused by dirt.

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