



BA BM

GB TECHNICAL MANUAL

Backflow preventer with verifiable reduced pressure zone
DN 15 to 50mm

Backflow preventers protect the drinking water network by interrupting the continuity of the supply, emptying and evacuating to waste in case of danger of water being turned back into the main pipeline. Protection at the connection point to the public potable water system.

TECHNICAL INFORMATION

Field of application :

- Protection against fluid category 4 (EN1717).
- Examples of applications :
 - Soap dispensing units ;
 - Photoshop equipment ;
 - Sealed heating systems > 45 kW ;
 - Brewery and distillation plant.

Note : applications also refer to national requirements.

- Medium : potable water ;
- Maximum working temperature 65°C ;
- Maximum pressure 1 MPa (10 bar) ;
- Inlet flow pressure minimum 200 kPa (2 bar).

Compliance with EN1717, EN12729, Acoustic ISO 3822 class 1 (DN15-DN32), and on national level :

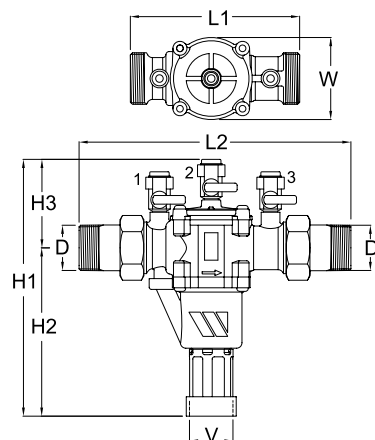
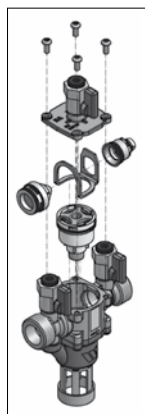
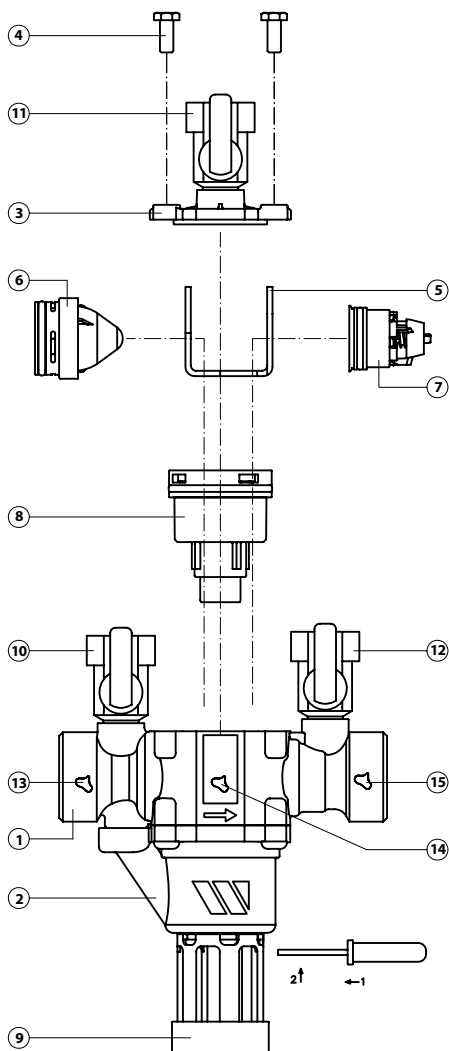
- | | |
|------------------|------------------------------------|
| • France | NF045 / Document Technique 3. |
| • Germany | DVGW Arbeitsblatt W570. |
| • Netherlands | Kiwa BRL-K646. |
| • United Kingdom | WRAS-criteria. |
| • Belgium | Belgaqua. |
| • Italy | SIET Rules 01588ST10. |
| • Sweden | SITAC 1002 - TG 0659-09. |
| • Switzerland | SVGW W/TPW135. |
| • Norway | SINTEF Produktsertifikat Nr. 1498. |
| • Denmark | VA |



WRAS
VA



EN 12729
EN 1717



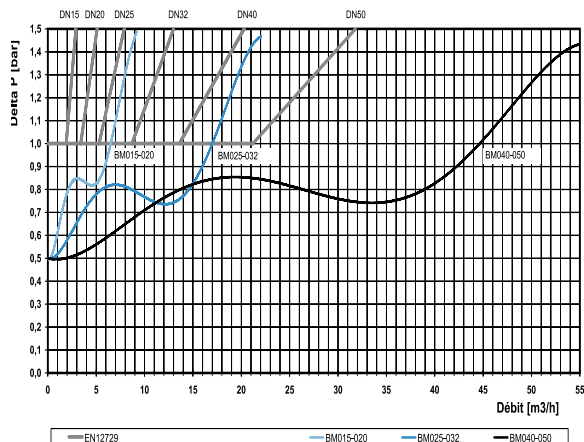
REF.	DN	D	V	L1	L2	H1	H2	H3	W	L	REF. SPARE PARTS KITS*
	mm	"	mm	mm	mm	mm	mm	mm	mm	Kg	
149B70000	15	1/2	32	122	201	168,5	103	65,5	53	1,2	149B1391
149B70001	20	3/4	32	122	201	168,5	103	65,5	53	1,2	149B1391
149B70002	25	1	40	157	252	238	156	82	76	2,7	149B1393
149B70003	32	1 1/4	40	157	252	238	156	82	76	2,7	149B1393
149B70004	40	1 1/2	50	220	336	303,5	202,5	101	115	6,5	149B1395
149B70005	50	2	50	220	336	303,5	202,5	101	115	6,5	149B1395

* KIT FOR BABM BACKFLOW PREVENTER

Packing : 1 kit by box with the following components :

- 1 upstream valve
- 1 downstream valve
- 1 discharge valve.

Pos.	Items
1	Main body
2	Relief valve body
3	Cover
4	Bolts
5	Retainer
6	First check valve module
7	Second check valve module
8	Relief valve module
9	Air-gap / tundish
10	Test cock 1
11	Test cock 2
12	Test cock 3
13	Inlet zone
14	Intermediate zone
15	Outlet zone



INSTALLATION AND COMMISSIONING INSTRUCTIONS

- Installation of a backflow preventer BA shall be carried out by qualified personnel.
- Before installing the protection unit BA the upstream piping shall be flushed thoroughly
- Install the BA-unit, consisting in flow direction of a first stop valve, strainer, BA-protection device and a second stop valve. The BA-unit must be readily accessible to allow access for testing, repair and replacement. The following dimensions shall be observed.
- The BA-unit shall be installed horizontally with the air-gap-to-drain downwards and without any tension and/or traction at the inlet and outlet connections.
- The location of installation shall not be liable to any flooding at all times and has to be protected against freezing.
- Remove the sealing plug from the relief valve
- The drain port dimension is meant to connect with a plastic waste pipe with an external diameter in accordance with table A.

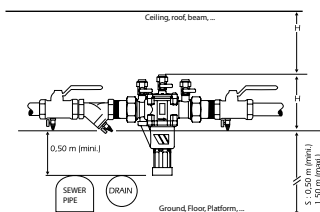


TABLE A

DN	6	8	10	15	20	25	32	40	50
m ³ /h	40	40	40	40	60	60	80	80	80

- Before putting the device into operation, the upstream piping and BA-device shall be de-aerated through test cock 10, 11 and 12.

TESTING

In compliance with national instructions a BA-unit shall be tested periodically, in most countries on an annual basis. Socla offers test kits with pressure gauge and hoses (reference : catalogue "Maintenance kits").

The testing shall be confirmed by means of the appropriate certification.

SPECIFICHE TECNICHE

- Main body : DZR brass CW602N.
- Relief valve body : Polymer PA (co-polyamide).
- First & second check valve module : Polymer POM.

OBSERVATIONS

OBSERVATION	POSSIBLE REASON	ACTION
1. Short-time discharge of water through relief valve followed by normal operation.	Pressure fluctuation in the water supply	None
2. At normal operation continuous water discharge through relief valve.	Relief valve polluted or damaged	Cleaning or replacement of relief valve module
3. In discharge mode continuous water discharge through relief valve.	a. First check valve polluted or damaged. b. Seal relief valve piston polluted or damaged. c. Second check valve polluted or damaged.	a. Cleaning or replacement of first check valve module. b. Cleaning or replacement of relief valve module. c. Cleaning or replacement of second check valve module.

MAINTENANCE INSTRUCTIONS

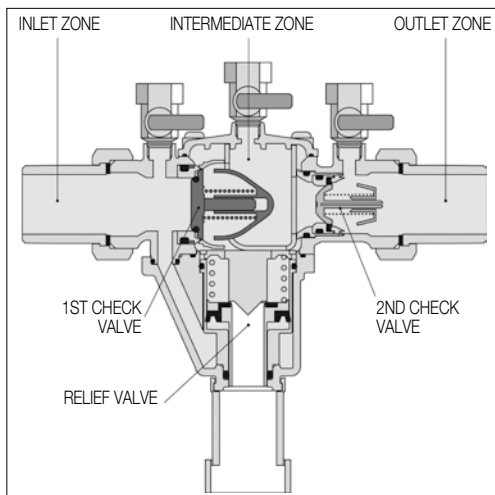
DISASSEMBLY

- Remove cover (3) from main body (1) by unscrewing bolts (4).
- Remove retainer (5).
- Remove first check valve module (6) with the use of a screwdriver as handle.
- Remove relief valve module (8) either by a M10 bolt or by pushing the module upwards with a flat tool through the air-gap (9).
- Remove second check valve module (7) with the use of a screwdriver as handle.

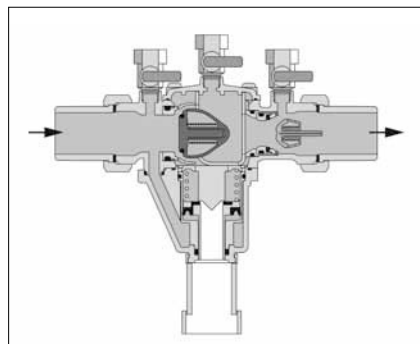
Note : disassembly of relief valve body (2) from the main body (1) is not foreseen.

ASSEMBLY

- Mount second check valve module (7) into its bore in main body (1).
- Mount the relief valve module (8) into its location in the relief valve body (2).
- Mount first check valve module (6) into its bore in main body (1) and turn to 45° the wings of the upstream valve.
- Position the retainer (5) between first & second check valve (6 & 7) and on top of the relief valve module (8). Only one position is possible.
- Mount the cover (3) and tighten the bolts (4).



OPERATION

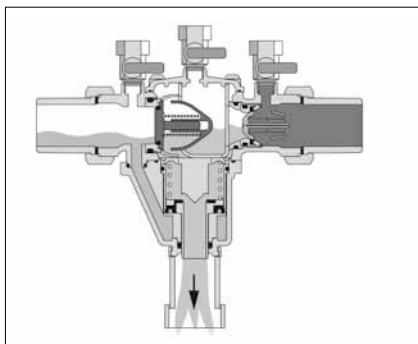


STATIC CONDITION, NO CONSUMPTION

Both check valves are closed. The pressure in the intermediary chamber remains 50 kPa lower than the inlet pressure, keeping the relief valve closed.

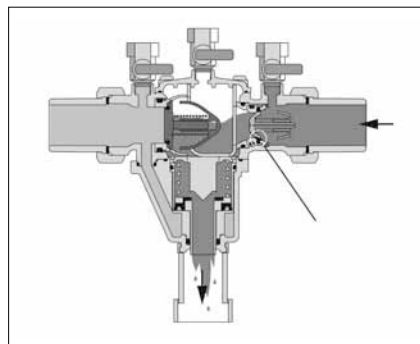
PRESSURE, FLOW

The first and second check valves are open. The water circuit pressure upstream of the relief valve keeps it closed. The pressure in the intermediary chamber is at least 50 kPa lower than the inlet pressure.



BACK SIPHONING, DISCHARGE INTERMEDIATE ZONE

When the water circuit pressure drops off, both check valves are closed. The relief valve is opened and the water from the intermediary chamber is drained through the water outlet. This creates an atmospheric "break" between the water circuit and the polluted or unknown quality water on the outlet site of the device.



BACK PRESSURE

- Second check valve is leak-tight : no discharge.
- Second check valve fouled : the relief valve will open and drain a quantity of water, so that the pressure in the intermediary chamber remains lower than the water circuit pressure

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