

BACKFLOW PREVENTER TYPE CA 573 NON CONTROLABLE REDUCED PRESSURE 4MS ACS

The backflow preventer is a hydraulic protection device designed to prevent polluted water from flowing back into the mains supply network. This type of backflow may occur when the pressure in the mains supply network changes and causes a reversal of the flow. The backflow preventer is installed between the mains supply network and the internal consumer circuit in water supply systems and creates a safety zone that prevents the water in the two circuits from coming into contact.

NF Certification with 10 years warranty.

4MS CW617N brass body and EPDM gaskets.

Compact type.



Size : DN1/2" to DN3/4"

Connection : Female BSP

Min Temperature : +5°C

Max Temperature : +65°C

Max Pressure : 10 Bars

Specifications : Compact type

Non Controlable

Nylon disc

With brass female union Ecobrass®

Materials : Brass body CW617N-4MS according to EN12165

*the installation defects and wear defects are not covered by the guarantee

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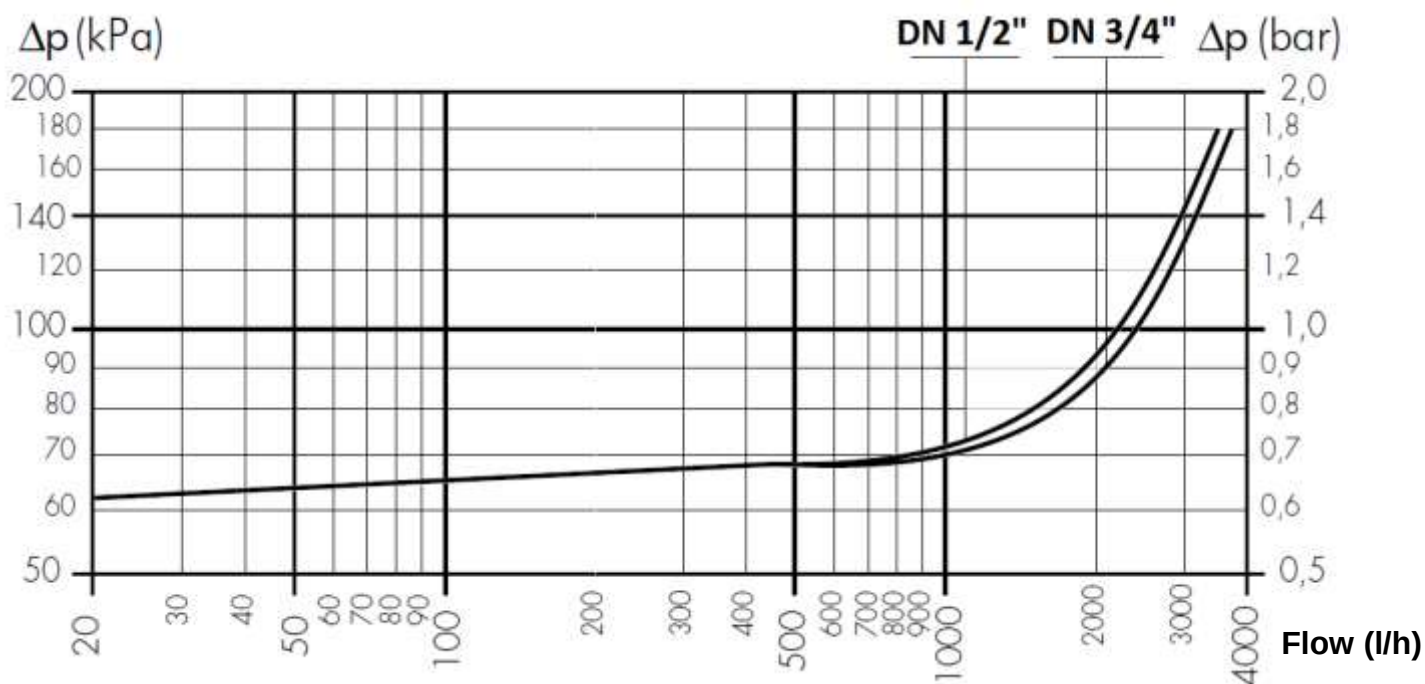
SPECIFICATIONS :

- Brass CW617N-4MS body
- Respect the flow direction indicated by an arrow on the body
- Horizontal position
- Female / female BSP
- Non Controlable
- Low head loss
- With female union Ecobrass®
- Strainer included
- 10 years manufacture warranty (the installation defects and wear defects are not covered by the guarantee)

USE :

- For boiler with a max power of 70Kw
- Water distribution
- Min Temperature Ts : + 5°C
- Max Temperature Ts : + 65°C
- Max Pressure Ps : 10 bars

HEAD LOSS GRAPH :



FLOW COEFFICIENT Kvs (M3 / h) :

DN	1/2"	3/4"
Kvs (m3/h)	2.2	2.4

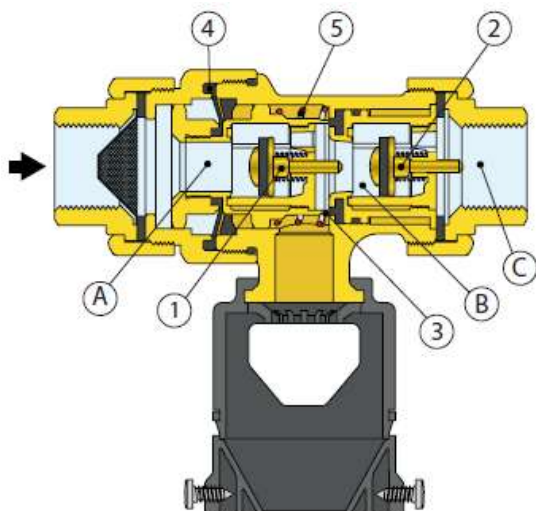
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OPERATING PRINCIPLE :

The CA type non-controllable backflow preventer with different pressure zones includes: an upstream check valve (1), a downstream check valve (2), a discharge device (3). The two check valves mark off three different zones, each of which at a different pressure: an upstream or inlet zone (A); an intermediate zone, also known as the reduced pressure zone (B); a downstream or outlet zone (C). The discharge device (3) is located in the intermediate zone. The discharge device (3) is connected directly to the diaphragm (4). This mobile assembly is opened and closed by the difference in pressure between upstream and downstream of the check valve and by the counter spring (5).

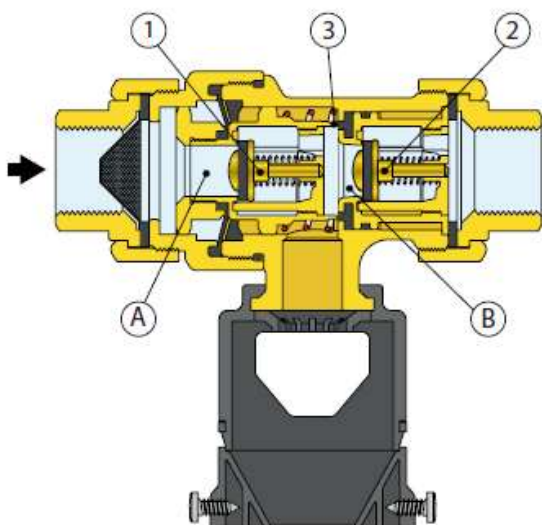
Correct flow conditions

Under correct conditions of flow, both check valves (1 and 2) are open, while the pressure in the intermediate chamber (B) is always lower than the pressure upstream (A) due to a pre-calculated head loss at the first check valve (1). As a result, this pressure difference acts on the internal membrane (4) and generates a force that keeps the drain valve closed (3), communicating with the atmosphere, pressing on the counter spring (5).



No flow conditions

The check valves (1 and 2) are now closed. Due to the difference in pressure that still exists between the upstream zone (A) and the intermediate zone (B), the drain valve (3) remains closed.

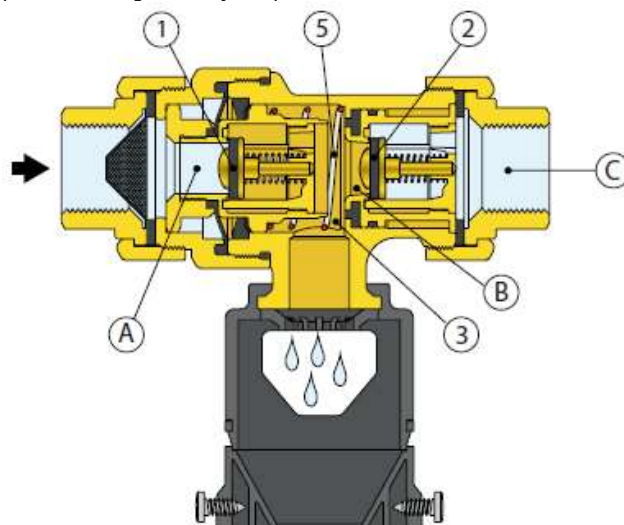


Upstream pressure loss

Both check valves (1 and 2) close as the pressure upstream drops. The drain valve (3) opens at the moment in which the difference in pressure Δp , existing between the upstream (A) and intermediate (B) zones reaches a value just below the one pre-calculated for the counter spring (5). Drainage continues until the intermediate chamber of the backflow preventer is empty.

This creates a (safety) air zone and prevents the contaminated water of the circuit, coming from zone (C), from returning into the water distribution mains, also in case of check valve (2) failure.

When the situation returns to normal (pressure upstream greater than pressure downstream), the drain valve closes and the backflow preventer is again ready to operate.



Downstream overpressure

If the pressure in the downstream zone (C) increases until it exceeds the upstream pressure value (A), the check valve (2) closes, thus preventing the water that has already been sent to the user from flowing back towards the water main.

Should check valve (2) have a slight sealing problem, or in general should any other malfunction occur in the backflow preventer, the latter will always shut off (disconnect) the connection between the user and the water main.

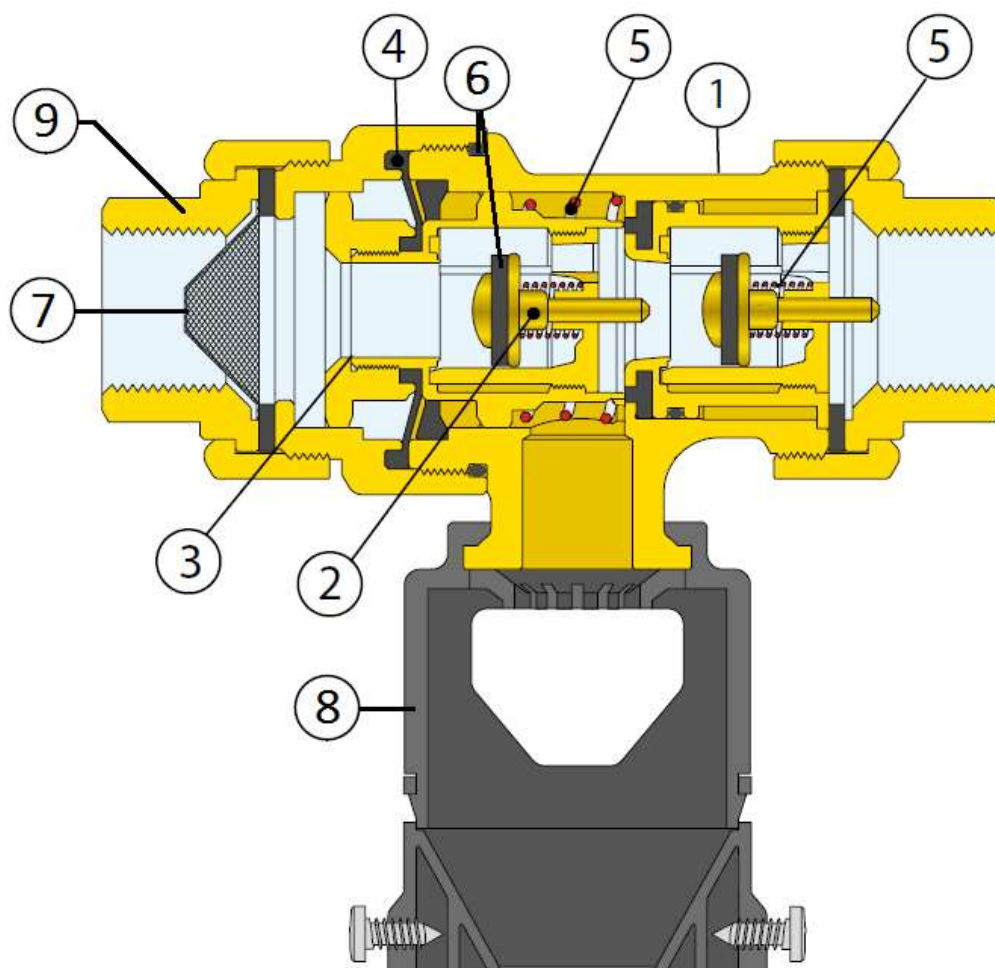
In fact the backflow preventer was designed with all the construction solutions required for a positive action device; the best possible safety conditions are therefore ensured under all conditions.

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RANGE :

- Female - female BSP cylindrical with female union from DN 1/2" to DN 3/4" **Ref.940**

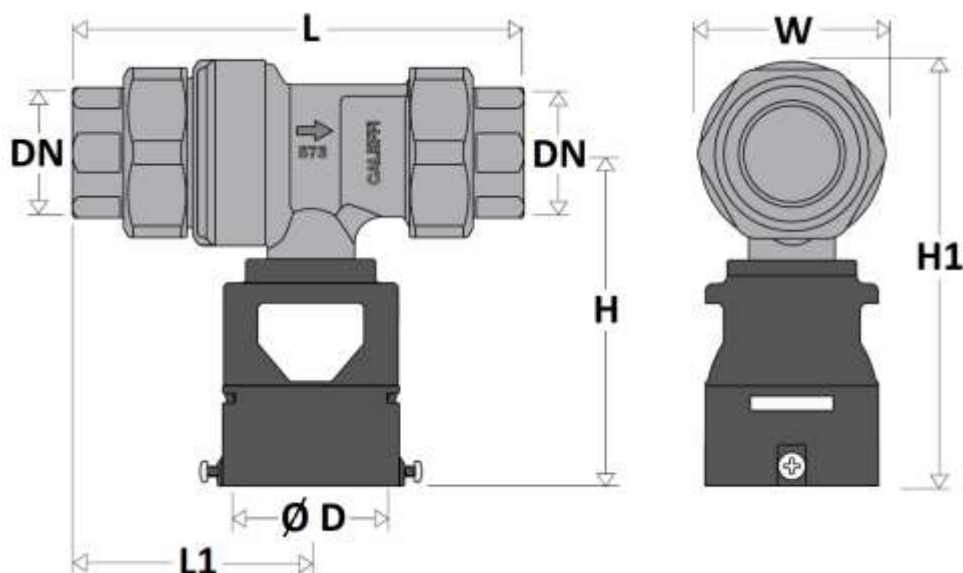
MATERIALS :



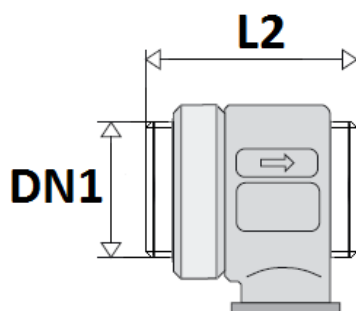
Item	Designation	Materials
1	Body	Brass CW617N-4MS according to EN 12165
2	Check valves	PSUG20 + dezincification-resistant Brass CR CW724R Ecobrass®
3	Check valve seat	dezincification-resistant Brass CR CW724R Ecobrass® according to EN 12165
4	Diaphragm	EPDM
5	Spring	AISI 302
6	Gasket	EPDM
7	Strainer	AISI 304
8	Evacuation support	Polymer
9	Union fitting	dezincification-resistant Brass CR CW724R Ecobrass® according to EN 12165

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SIZE (in mm) :



SIZE WITHOUT FITTINGS :



DN	1/2"	3/4"
DN1	M38x1.5	M38x1.5
L	114.5	114.5
L1	60.5	60.5
L2	70.5	70.5
H	84.4	83.9
H1	108	108
W	47.8	47.8
Ø D	40	40
Weight (in Kg)	0.73	0.73
Sferaco Ref.	940004	940005
Caleffi Ref.	573415	573515

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STANDARDS :

- Manufacturer certified ISO 9001 : 2015 and ISO 14001 : 2015
- DIRECTIVE 2014/68/EU : Products excluded from directive (Article 1. § 2b)
- French water agreement **A.C.S. N° 23 ACC LY 655**
- Designing according to **NF EN 14367**
- Safety device according to **NF045 doc 4**
- Threaded female BSP cylindrical ends according to ISO 228-1

ADVICE : Our opinion and our advice are not guaranteed and SFERACO shall not be liable for the consequences of damages.
The customer must check the right choice of the products with the real service conditions.

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