CA 9C

Backflow preventer with non-verifiable reduced pressure zone

Technical data sheet

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Description

The CA 2096 backflow preventer is a device with 2 check valves separated with a zone connected to the atmosphere. Backflow preventer, compact type, used to prevent the reverse flow of polluted/contaminated water (fluid class 3). The valve offers protection with regard to back-siphonage as well as backflow, and was especially developed domestic heating installation < 70 KW.

- Protect against backflow from a fluid of category 3 (EN1717 – EN 14367)
- Compact
- Perfect sealing: double check valve, discharge valve
- Low pressure loss
- Integrated strainer
- Compliant with NF, Kiwa, Belgaqua approvals
- Materials compliant with UBA requirements and 4MS

CA9C

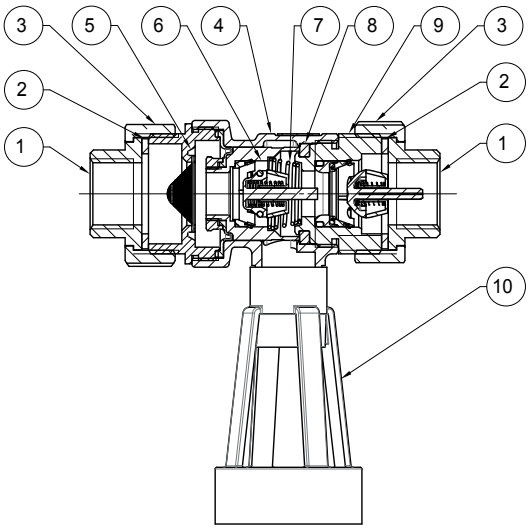
Backflow preventers with non-verifiable reduced pressure zone

DN		Connection	PFA (in bar)	Reference	Weight (in kg)
“	mm				
1/2	15	F/F	10	2230115	0,61
1/2	15	M/M	10	2230125	0,66
3/4	20	F/F	10	2230215	0,66
3/4	20	M/M	10	2230225	0,70

Technical features	
Operating temperature	Maxi. 65 °C
Permissible operating pressure (PFA) in water	10 bar
Connection	Female/female, BSP
Mediums	Clears water

Nomenclature and materials

N°	Designation	Materials
1	Nipple	Brass
2	Seal	EPDM
3	Nut	Brass
4	Body	Brass
5	Filter connection	Brass + Stainless steel
6	Upstream valve	Brass-Hostaform-Stainless steel-EPDM
7	Relief valve spring	Stainless steel
8	Relief valve seal	Silicone
9	Downstream valve	Brass-Hostaform-Stainless steel-EPDM
10	Funnel	ABS



Approvals

International construction standard :

- EN1717 - EN14367
- ISO for connections 228

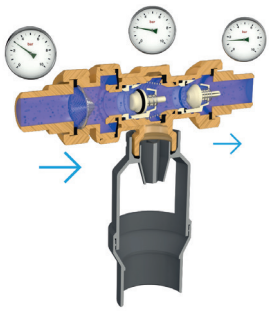
Application

The CA-a type backflow preventer with non-controllable pressure zones, is intended, within the limits defined by the health authority, to protect drinking water networks against the return of polluted fluids that do not present major toxic or microbiological risks for human health (fluid from category 3) :

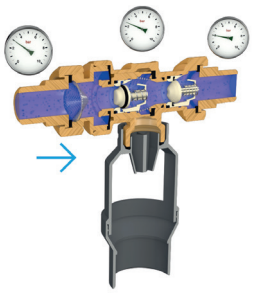
- For domestic heating installations with a capacity of less than 70 kW,
- Automatic beverage dispensers,
- Collective dishwashers
- Coffee machines
- Water dispenser

Operating principle

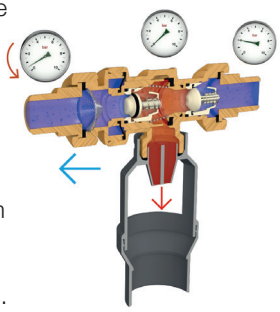
1. Normal operation under flow: the two check valves are open allowing the flow of the water, the discharge valve remaining closed.



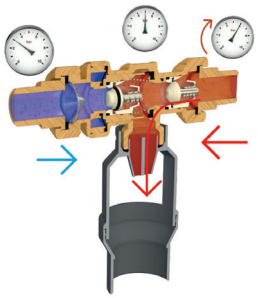
2. Stop of the flow; static pressure: the device is under pressure, the two check valves are now closed, and the discharge valve remains closed due to the difference in pressure that still exist between the upstream pressure and the intermediate zone.



3. Backflow conditions : in case of pressure loss upstream, the two check valves are closed, the depression causes the opening of the discharge valve and the venting of the intermediate zone. In case of downstream overpressure, the second check valve is closed prohibiting any water returns.



4. If exceptionally the second check valve downstream is failing, the discharge valve opens to evacuate the potentially poluted fluid.This device is built as a positive acting device and mantains a high level of safety in all situations.



Installation

A. Assemble the CA9C after the water supply system has been cleaned and rinsed. Install the CA9C in front of the dangerous appliance.
B. Install the CA9C horizontally. The backflow protection device must be installed in such a manner that it can be easily accessed for inspection, for checking the proper functioning, and for maintenance purposes.
C. A shut off valve and/with draining device must be installed in front of the CA9C.
D. The relief opening must be connected to a discharge pipe of Ø 40 mm via the enclosed funnel.
E. In case of installation without a discharge pipe, the CA9C should be installed at a height of at least 30 cm above the drain.
F. It is possible that after installation and commissioning of the installation, the drain opening may leak some water, until the valve seats have settled in place. Leakages may also occur if due to insufficient flushing of the pipeline network, contaminants are not properly removed.

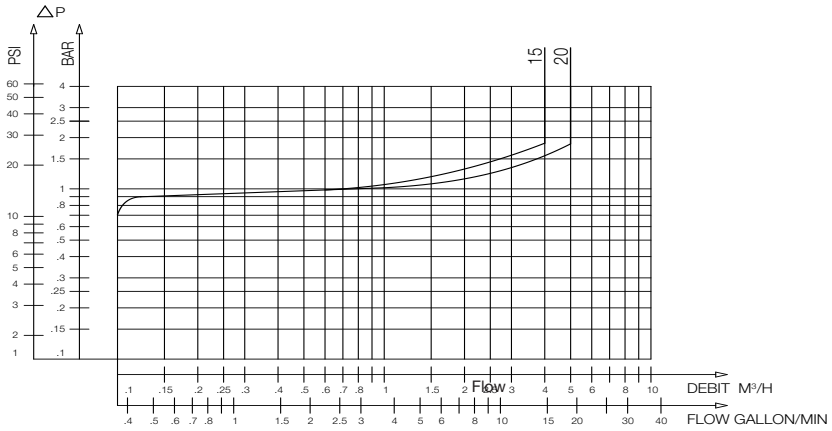
Maintenance

The backflow preventer is a health protection safety device and therefore requires periodical inspection. Watts Industries recommends that the CA9C backflow protection device should be inspected at least once a year.
The first indication of malfunction, generally caused by foreign debris (sand, copper or calcium…), is revealed with a permanent leak from the drain.
In the case of leakage at the drain, it is recommended to generate a major flow of circulation by opening some taps for a few minutes: this is often sufficient to expel any foreign debris and bring everything back to normal situation.
This leak is merely an early warning and definitely does not put the safety of the device at risk, but it requires removing and cleaning the device and the upstream strainer

Operating

Direction for use :

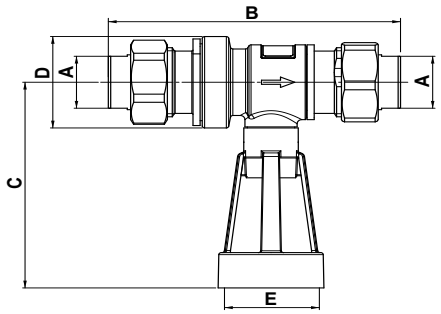
- Solid line: Valve completely open



CA9C - Headloss chart

Sizing

code ref.	diameter A			B (mm)	C (mm)	D (mm)	E (mm)
2230115	F/F	1/2”	(15x21)	122	99	44	40
2230125	M/M	1/2”	(15x21)	150	99	44	40
2230215	F/F	3/4”	(20x27)	153	99	44	40
2230225	M/M	3/4”	(20x27)	150	99	44	40



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