

FlowShield™ DuC-AV Backflow preventer with intermediate atmospheric vent

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573 Series

Function

The Caleffi Series 573 FlowShield™ DuC-AV is a dual check backflow preventer with an intermediate atmospheric vent. It is designed to protect drinking water systems from the backflow of contaminated fluids, whether caused by backsiphonage or backpressure. In backflow conditions, the valve discharges contaminated fluids through its atmospheric vent.



The FlowShield DuC-AV complies with ASSE 1012 performance standards and is certified by ICC-ES. It is listed and certified by CSA Group to CSA standard B64.3. Additionally, it meets NSF/ANSI/CAN 372 requirements for low lead and lead-free materials, as certified by ICC-ES. This product complies with the IPC, IRC, NPC, and UPC for use in accordance with U.S. and Canadian plumbing codes, certified by ICC-ES.

NSF/ANSI/CAN 372



Product range

573 Series FlowShield DuC-AV
dual check backflow preventer with atmospheric vent
size 1/2" - 3/4" NPT female threaded connection with union
size 1/2" sweat connection with union
size 1/2" press connection with union

Technical specifications

Connections:

1/2" - 3/4" NPT female with union
1/2" sweat with union
1/2" press with union

Materials: Body:

brass EN12165 CW617N

Filter:

stainless steel

Check valve:

PSU

Check valve stem:

brass EN12165 CW724R

Diaphragm:

peroxide-cured EPDM

Seals:

peroxide-cured EPDM

Meets the "lead free" requirement of Section 1417 of the Safe Drinking Water Act (SDWA).

This product has a weighted average lead content of less than 0.25% for its wetted surfaces contacted with consumable water.

Maximum working pressure:

175 psi (12 bar)

Maximum working temperature:

210 °F (99 °C)

Emergency back pressure temperature:

250 °F (121 °C)

Medium:

water

Certifications:

- ASSE 1012, UPC, IPC, IRC, and NPC compliance for use in accordance with U.S. and Canadian plumbing codes. Certified and listed by ICC-ES, PMG File 1359.
- CSA B64.3, Backflow Preventers - Dual Check Valve w/atmospheric port (DCAP). Listed and certified by CSA Group, File Number 219199.
- NSF/ANSI/CAN 372, US and Canadian Low-Lead and Lead-Free materials contents laws for drinking water system components. Certified by ICC-ES, PMG File 1360.



SAFETY INSTRUCTION

This safety alert symbol will be used in this manual to draw attention to safety related instructions. When used, the safety alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN A SAFETY HAZARD.**



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warning.ca.gov.



CAUTION: All work must be performed by qualified personnel trained in the proper application, installation, and maintenance of systems in accordance with all applicable codes ordinances.



CAUTION: If the backflow preventer is not installed, commissioned and maintained properly, according to the instructions contained in this manual, it may not operate correctly and may endanger the user.



CAUTION: Make sure that all the connecting pipework is water tight.



CAUTION: When making the water connections, make sure that the backflow preventer connecting pipework is not mechanically over-stressed. Over time this could cause breakages, with consequent water losses which, in turn, could cause harm to property and/or people.



CAUTION: Water temperatures higher than 100 degrees F can be dangerous. During the installation, commissioning and maintenance of the backflow preventer, take the necessary precautions to ensure that such temperatures do not endanger people.



CAUTION: In the case of highly aggressive water, arrangements must be made to treat the water before it enters the backflow preventer, in accordance with current legislations. Otherwise, the valve may be damaged and will not operate correctly.



WARNING: The outer surface of the device, especially in polymer type components, must not come into contact with any chemical substance, either on purpose or accidentally. The system fluid and any chemical additives used within the water piping system – whether for washing or as protection – must be compatible with the materials used to make the device and with the function it performs.

Caleffi shall not be liable for damages resulting from stress corrosion, misapplication or misuse of its products.



CONSIGNE DE SÉCURITÉ

Ce symbole d'avertissement servira dans ce manuel à attirer l'attention sur la sécurité concernant instructions. Lorsqu'il est utilisé, ce symbole signifie. **ATTENTION! DEVEZ-ALERTER ! VOTRE SÉCURITÉ EST EN JEU ! NE PAS SUIVRE CES INSTRUCTIONS PEUT PROVOQUER UN RISQUE DE SECURITE.**



AVERTISSEMENT: Ce produit peut vous exposer à des produits chimiques comme le plomb, qui est connu dans l'État de Californie pour causer le cancer, dommages à la naissance ou autre. Pour plus d'informations rendez-vous www.P65Warnings.ca.gov.



AVERTISSEMENT: Tous les travaux doivent être effectués par du personnel qualifié formé à la bonne application, installation et maintenance des systèmes conformément aux codes et règlements locaux.



AVERTISSEMENT: Si Disconnecteur n'est pas installé, mis en service et entretenu correctement, selon les instructions contenues dans ce manuel, il peut ne pas fonctionner correctement et peut mettre en danger l'utilisateur.



AVERTISSEMENT: S'assurer que tous les raccords sont étanches.



AVERTISSEMENT: Lorsque vous effectuez les raccords d'eau, assurez-vous que la tuyauterie reliant le disconnecteur n'est pas mécaniquement overstressed. Au fil du temps, ceci pourrait causer des ruptures, avec pour conséquence des pertes en eau qui, à leur tour, peuvent causer des dommages à la propriété et/ou les gens.



AVERTISSEMENT: Les températures de l'eau supérieures à 100 degrés peuvent être dangereuses. Au cours de l'installation, mise en service et l'entretien de la disjoncteur, prendre les précautions nécessaires afin de s'assurer que de telles températures ne compromettent pas les gens.



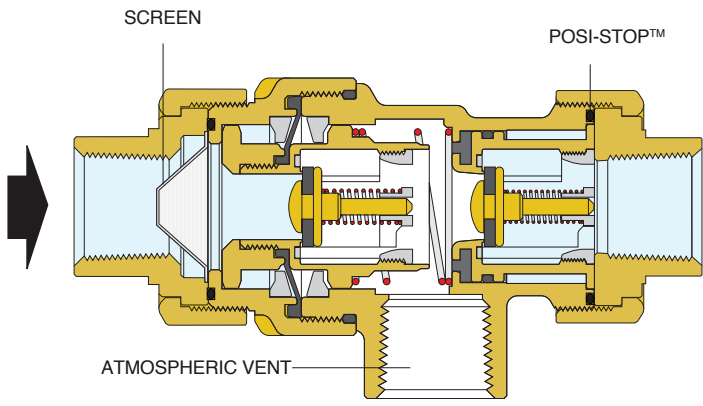
AVERTISSEMENT: Dans le cas de l'eau fortement agressive, des dispositions doivent être prises pour traiter l'eau avant qu'elle ne pénètre dans le disjoncteur, conformément à la législation actuelle. Sinon la soupape pourrait être endommagée et ne fonctionne pas correctement.



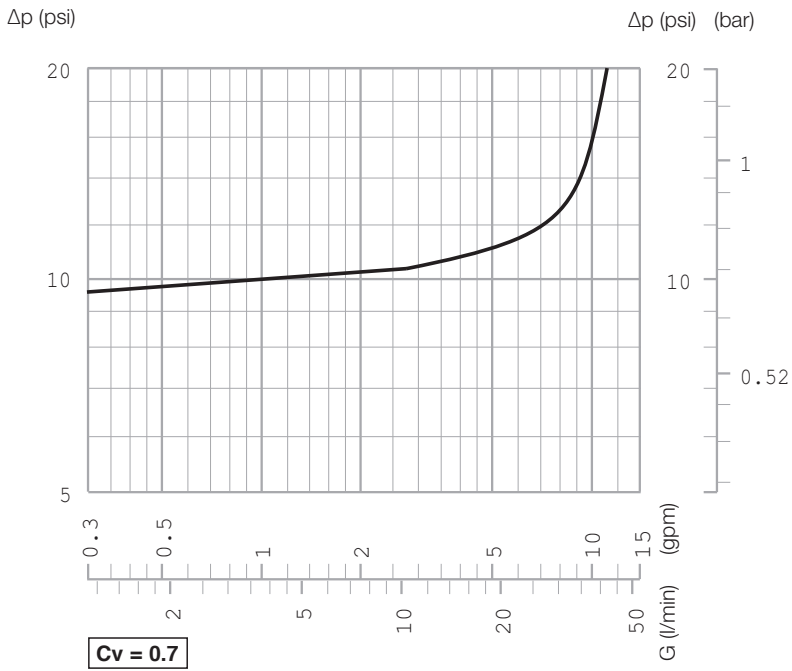
AVERTISSEMENT: La surface extérieure de l'appareil, en particulier les composants de type polymère, ne doit pas entrer en contact avec des substances chimiques, que ce soit volontairement ou accidentellement. Le produit et les additifs chimiques utilisés dans les canalisations d'eau - que ce soit pour le lavage ou la protection - doivent être compatibles avec les matériaux utilisés pour la fabrication de l'appareil et avec la fonction qu'il remplit.

Caleffi ne pourra être tenue responsable des dommages résultant de la corrosion, d'une mauvaise utilisation ou d'une mauvaise utilisation des produits.

Construction details



Flow rate graph



Installation

The 573 Series FlowShield DuC-AV dual check with atmospheric vent backflow preventer must be installed according to the diagrams in this instruction manual, and adhering to the local jurisdiction's applicable codes and regulations.

Before installing the FlowShield DuC-AV, the system must be thoroughly flushed to remove impurities or any debris which may have accumulated during installation. Failure to remove dirt or debris may affect performance and the manufacturer's warranty.

The 573 Series FlowShield DuC-AV must be installed horizontally and following the flow direction indicated by the arrow on the valve body.

The device must be installed with an isolating valve and strainer upstream and an isolating valve downstream.

The 573 Series FlowShield DuC-AV must be installed in an accessible location to facilitate testing and servicing.

The device must be installed with the vent port connected to a discharge line, ensuring an air gap between the bottom of the discharge line and the floor. Follow the local jurisdiction's plumbing code requirements and maintain a minimum clearance of 12 inches from the floor.

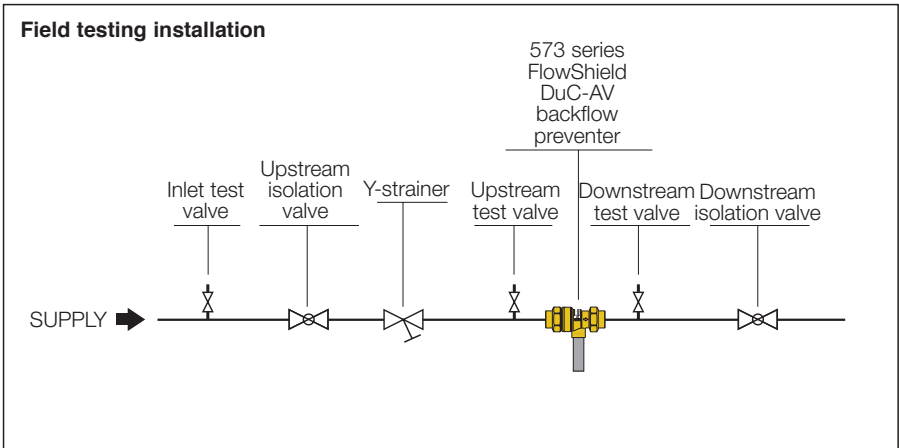
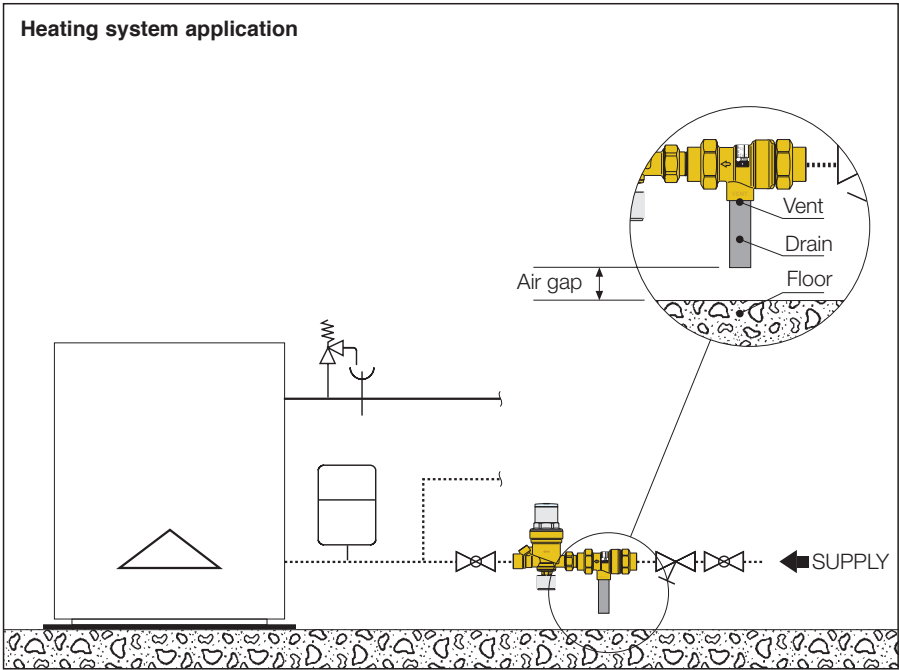
Do not install where the discharge line could cause damage from discharged contaminated fluid.

If field testing is required by code, it must be installed in accordance with the relevant diagram in this instruction manual.

NOTE:

When installing the 573 series FlowShield DuC-AV with sweat tailpieces, sweat the tailpiece to the pipe before installing the body. This is done to prevent damage to the embedded o-ring in the body of the product.

Installation diagram



Field testing procedure

Test 1) Check operation of the discharge atmospheric vent. When the inlet pressure drops to atmospheric, the atmospheric vent port shall open and discharge the fluid contained in the valve body.

- a. Close the upstream and downstream isolating valves.
- b. Open the upstream test valve.

Result: The fluid contained in the body must be discharged, indicating that the vent port was successfully opened.

Test 2) Check sealing integrity of the internal second check valve. When backpressure is applied to the downstream side of the valve, the second check valve must seal tightly without any dripping through the discharge.

- a. Close the upstream and downstream isolating valves.
- b. Open the upstream test valve.
- c. Install a temporary bypass hose connecting inlet test valve to downstream test valve and open them for admitting pressure to the downstream side of the internal second check valve.

Result: Water must not drip from the vent port indicating that the second check valve properly functioning.



Code	Description
573100A	Replacement body

NOTES

LEAVE THIS MANUAL WITH THE USER.

Laissez ce manuel à la disposition de l'utilisateur.



Caleffi North America, Inc.
3883 West Milwaukee Road
Milwaukee, WI 53208
T: 414.238.2360 F: 414.238.2366

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**For Technical Support call 1-414-338-6338, or
email techsupport.us@caleffi.com**