

**FlowShield™ DuC-AV**  
**Backflow preventer with intermediate atmospheric vent**

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**573 Series**

**Function**

This dual check backflow preventer with intermediate atmospheric vent is designed to protect drinking water systems from the return, caused by backsiphonage or backpressure, of contaminated fluids.



The Caleffi 573 series FlowShield™ DuC-AV is certified by ICC-ES to be in compliance with the International Plumbing Code (IPC), International Residential Code (IRC), Uniform Plumbing Code (UPC), and standards ASSE 1012-2021, and CSA B64.3-94. Additionally, it is also complies with NSF/ANSI/CAN 372, low lead, as certified by ICC-ES, Drinking Water System Components – Lead Content Reduction of Lead in Drinking Water Act, California Health and Safety Code 116875 S.3874, Reduction of Lead in Drinking Water Act.

**Product range**

573 Series FlowShield DuC-AV  
dual check backflow preventer with atmospheric vent  
size ½" - ¾" NPT female threaded connection with union  
size ½" sweat connection with union  
size ½" press connection with union



**Technical specifications**

Connections: ½" - ¾" NPT female with union  
½" SWT with union  
½" press with union

Materials: Body: low lead brass  
Filter: stainless steel  
Check valve: PSU  
Check valve stem: brass  
Diaphragm: peroxide-cured EPDM  
Seals: peroxide-cured EPDM

Maximum working pressure: 175 psi (12 bar)  
Maximum working temperature: 210°F (99°C)  
Emergency back pressure temperature: 250°F (121°C)  
Medium: water

Certified to: ASSE 1012-2021, by ICC-ES, file PMG-1359.  
CSA B64.3-94, file 219199.

NSF/ANSI/CAN 372-2011, Drinking Water System Components-Lead Content Reduction of Lead in Drinking Water Act, California Health and Safety Code 116875 S.3874, Reduction in Drinking Water Act, as certified by ICC-ES, file PMG-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](http://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.

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 ALERTE ! 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](http://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 less raccordements sont étanches.



**AVERTISSEMENT:** Lorsque vous effectuez les raccordements d'eau, assurez-vous que lat tuyauterie reliant disconnecteur n'est pas mécaniquement des 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.

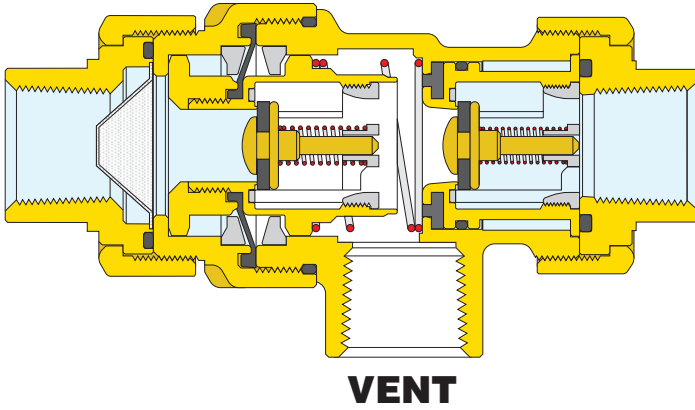


**AVERTISSEMENT:** Les températures de l'eau supérieure à 100 degrés peut être dangereux. Au cours de l'installation, mise en service et l'entretien de la disconnecteur, prendre les précautions nécessaires afin de s'assurer que de telles températures ne compromettent pas les gens.

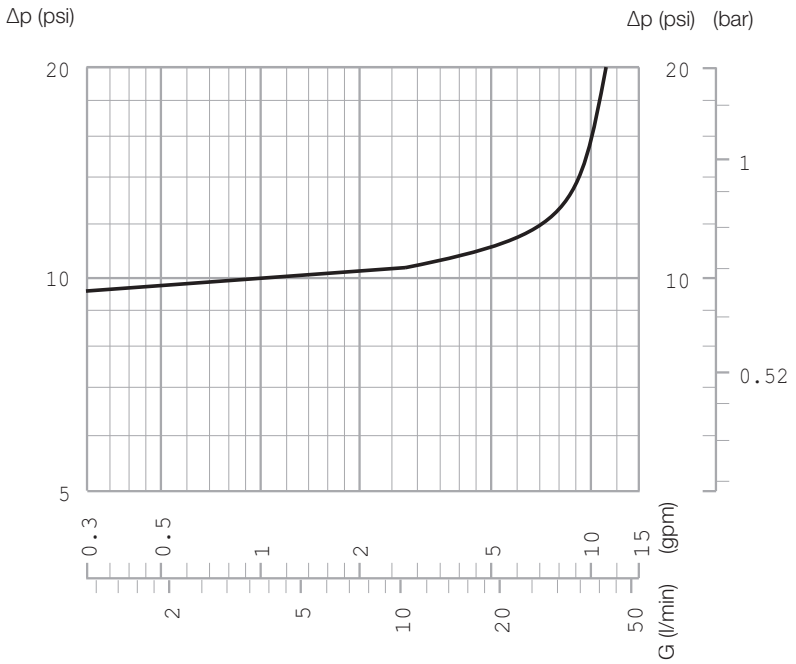


**AVERTISSEMENT:** Dans le cas de l'eau fortement agressifs, des dispositions doivent être prises pour traiter l'eau avant qu'elle ne pénètre dans le disconnecteur, conformément à la législation actuelle. Sinon las soupape pourrait être endommagée et ne fonctionnent pas correctement.

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



**Flow rate graph**



**Cv = 0.7**

## **Installation**

The 573 Series FlowShield DuC-AV backflow preventer with atmospheric vent must be installed in accordance with the diagrams contained in this instruction manual taking into account all the applicable Codes and Regulations.

Before installing, 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 guarantee.

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

It also must be installed with one isolating valve and a strainer upstream and one isolating valve downstream.

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

It must be installed with the vent port connected via an air gap to a discharge line, in accordance with the plumbing code requirements and keeping a minimum distance of 12" from the floor.

Do not install where the discharge can could cause damage.

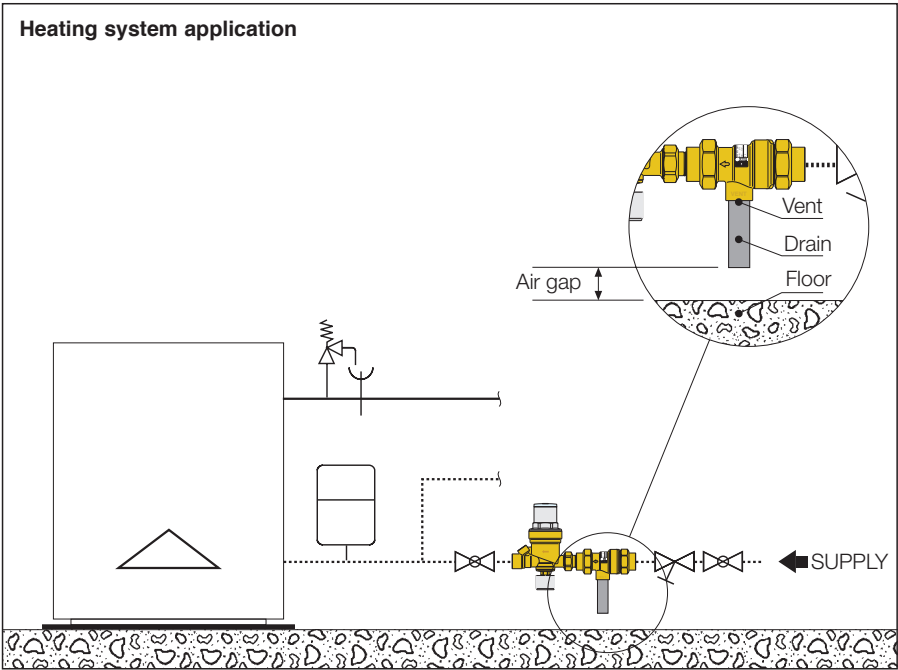
If field testing is required by code, it must be installed in accordance with the relevant diagram in this instruction manual.

### **NOTE:**

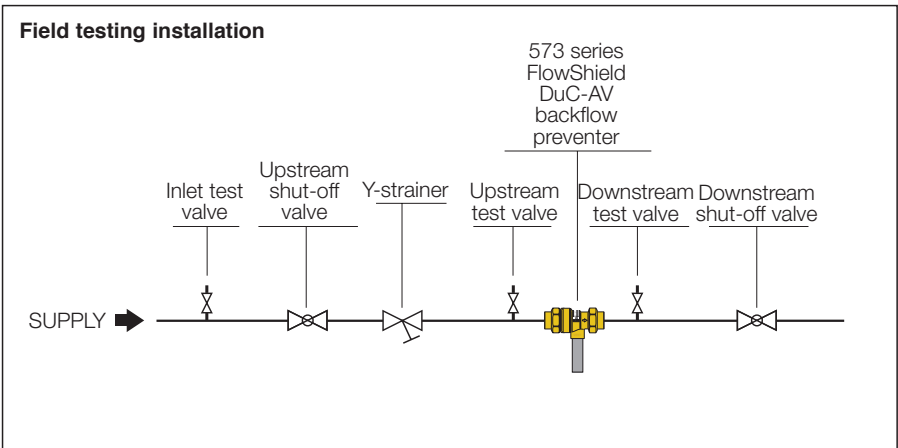
When installing the 573 series FlowShield DuC-AV with sweat tailpieces, sweat the tailpiece to the pipe before installing the body which includes an embedded o-ring.

# Installation diagram

## Heating system application



## Field testing installation



## **Field testing procedure**

1) Check operation of the discharge. When inlet water pressure drops to atmospheric, the valve must open the vent port and discharge the contained amount of water in the valve body.

- a. Close shutoff valves upstream and downstream.
- b. Open the upstream test cock

The water contained in the body must be discharged, indicating that the diaphragm has opened the vent port.

2) Check for tightness of the internal second check valve. When backpressure is applied to the downstream side of the valve, the internal second check valve must close back drip tight on its seat.

- a. Close shutoff valves upstream and downstream.
- b. Open the upstream test cock
- c. Install a removable bypass hose connecting inlet test cock to downstream test cock and open them for admitting pressure to the downstream side of the internal second check valve. Water must not drip from the vent port indicating that the second check valve is not leaking.

## **Service**

A replacement body assembly, 573100A, is available for order.

## NOTES

LEAVE THIS MANUAL WITH THE USER.

Laissez ce manuel à la disposition de l'utilisateur.



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09-2023

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