CALEFFI Hydronic Solutions

www.caleffi.com

# FlowCal™ Y-strainer

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## 120 series

### Function

The FlowCal™ Strainer version combines a Y-strainer with an integral ball valve. Inspection, cleaning, and replacing the strainer cartridge can be done easily without removing the body from the pipeline. The ball valve control stem is blow-out proof and has as standard a zinc-plated steel handle with vinyl grip. PT test ports are available, separately purchased or pre-assembled to check for the degree of clogging in the strainer. Drain valves are also available as an accessory for installing in the blowdown port connection.

This item is designed for use in closed hydronic systems. Do not use this item in plumbing applications. It does not meet the low-lead plumbing standards of U.S. and Canada.

### Product range

120 Series Y-strainer with ball valve, with and without pressure and temperature test ports: sizes 1/2" - 3/4" - 1" - 1 1/4".

### Technical characteristics

| | | |
|---|---|---|
| Material: | Body: | brass |
| | Strainer cartridge: | stainless steel |
| | Seals: | peroxide-cured EPDM |
| | Ball: | brass, chrome-plated |
| | Ball seat and stem seal: | PTFE + peroxide-cured EPDM |
| | Lever: | zinc coated steel with vinyl grip |
| | Pressure and temperature test port plugs: | brass |
| | Pressure and temperature test ports: | body and cap- brass; core- nordel |
| | Drain port plug: | brass |
| Performance: | Medium: | water, glycol solutions |
| | Max. percentage of glycol: | 50% |
| | Max. working pressure: | 400 psig (400 WOG) |
| | Working temperature range: | 14–212°F (-20–100°C |
| | Strainer mesh diameter: | 0.87 mm (20 mesh) |
| Connections: | | 1/2", 3/4", 1", 1-1/4" FNPT or Sweat with union x FNPT or Sweat |
| Pressure and temperature test ports connections: | | 1/4" |
| FNPT Blowdown port connection: | | 1/2" - 3/4": 1/4" FNPT<br>1" - 1 1/4": 1/2" FNPT |
| Flow rate (Cv): | | 1/2": 8.0; 3/4": 8.4; 1": 19.3; 1-1/4": 20.0 |
| Identification: | | metal plate with ball chain stating strainer mesh size |

## 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.P65Warnings.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 and ordinances.

**CAUTION:** Over-tightening and breakage can occur with the use of Teflon® pipe joint compounds. Teflon® provides lubricity so that care must be exercised not to over-tighten joints. Failure to follow these instructions could result in property damage and /or personal injury.

**WARNING:** System fluids under pressure or temperature can be hazardous. Be sure the pressure has been reduced to zero and the system temperature is below 100°F (38°C). Failure to follow these instructions could result in property damage and/or personal injury.

**WARNING:** Clean the pipes of any debris, rust, incrustations, welding slag and any other contaminants. For optimal operation, air in the system must be removed.

**CAUTION:** If the FlowCal™ Y-strainer 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.

Caleffi shall not be liable for damages resulting from stress corrosion, misapplication or misuse of it 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! DEVENEZ 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.

**ATTENTION:** 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.

**ATTENTION:** Un serrage excessif et la rupture peut se produire avec l'utilisation de composés à joint de tuyau en Téflon®. Pouvoir lubrifiant Teflon® permet de sorte qu'il faut prendre soin de ne pas trop serrer les articulations. Le non-respect de ces instructions peut entraîner des dommages matériels et/ou des blessures.

**AVERTISSEMENT:** Les liquides du système sont sous pression ou de la température peuvent être dangereux. Être sûr que la pression a été réduite à zéro et la température du système est inférieure à 100°F (38°C). Le non-respect de ces instructions peut entraîner des dommages matériels et/ou des blessures.Le non-respect de ces instructions peut entraîner des dommages matériels et/ou des blessures.

**AVERTISSEMENT:** Nettoyer les tuyaux de tout débris, rouille, incrustations, scories de soudure et d'autres contaminants. Pour un fonctionnement optimal, de l'air dans le système doit être retiré.

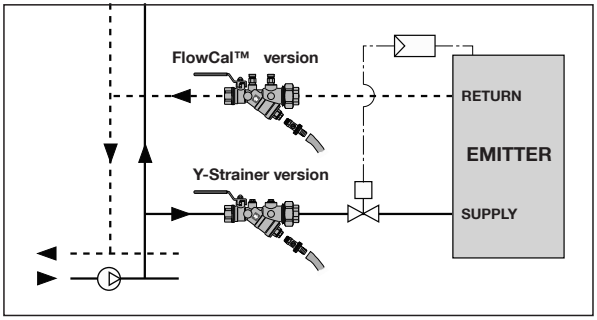
**ATTENTION:** Si le Filtre en Y, n'est pas installé, mis en service et entretenu correctement, selon les instructions contenues dans ce manuel, il peut ne pas fonctionner correctement et peut mettre en danger l'utilisateur.

**ATTENTION:** S'assurer que tous les raccordements sont étanches.

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

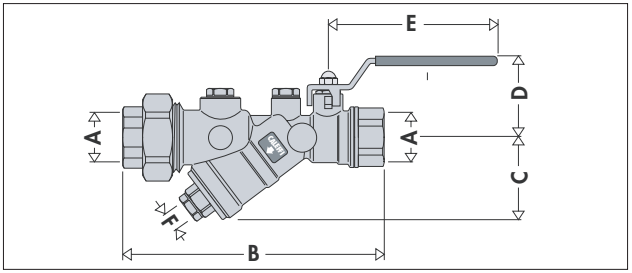
**Installation**

Install the FlowCal™ Y-strainer on the circuit supply pipe of the emitter coil to prevent clogging, with flow direction arrows indicating proper flow direction. It is important to allow easy access to the FlowCal™ for inspection and maintenance.
The identification tag with the technical data must accompany the y-strainer after installation. It is equipped with a special metal retaining ball chain especially useful when the valve is enclosed with insulation.
Install a balancing valve (Caleffi series 121) on circuit return pipe of the emitter coil. Strainers should be inspected and cleaned after start-up and twice per year thereafter.
FlowCal™ balancing valves and Y-Strainers may be installed in the pipe horizontally, vertically or at any angle. For Sweat fittings: union sweat tailpieces should be removed from the valve body for sweating to the pipeline. Remove the flow cartridge of the balancing valve (and adapter for larger sizes) and pressure port plugs while sweating the fixed end into the pipeline. In addition, wrap a wet cloth around the ball valve portion of the series 121 flow balancing valve (and the series 120 Y-strainer) when sweating in the integral sweat body connection.




Scan to view
120 Y-Strainer
Installation Tip

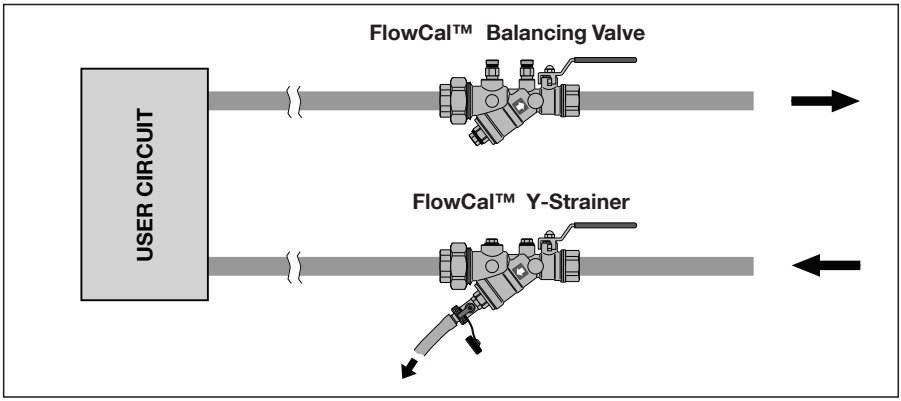
**Dimensions**



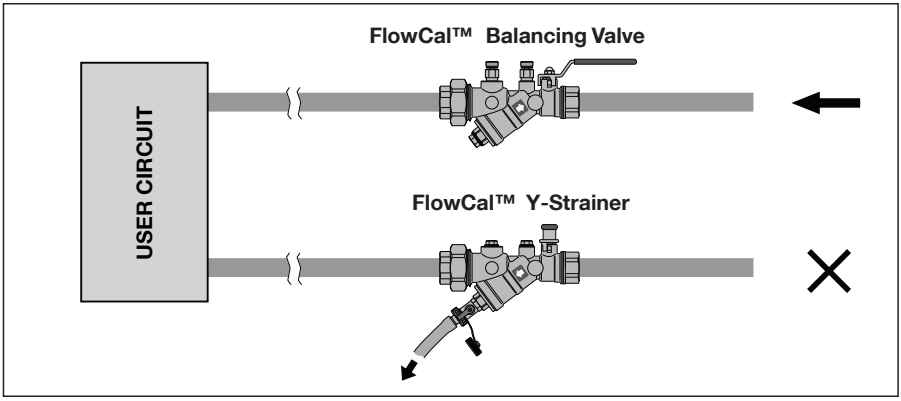

| Code | A | B | C | D | E | F | Weight (lb) |
|---|---|---|---|---|---|---|---|
| **120**14 ... | ½" | 6 3/16" | 1 15/16" | 1 15/16" | 3 15/16" | ¼" | 3.00 |
| **120**15 ... | ¾" | 6 1/4" | 1 15/16" | 1 15/16" | 3 15/16" | ¼" | 3.00 |
| **120**16 ... | 1" | 8 5/8" | 3 3/4" | 2 5/8" | 4 3/4" | ½" | 6.00 |
| **120**17 ... | 1 ¼" | 8 11/16" | 3 3/4" | 2 5/8" | 4 3/4" | ½" | 6.00 |

**Strainer servicing notes**

The strainer cartridge can be cleaned without removing it from the Y-strainer body:
Opening the drain valve (cod. 538202 FD - 1/4" NPT; 538402 FD-1/2" NPT optional) and allowing the dirt to blow into a drain line.

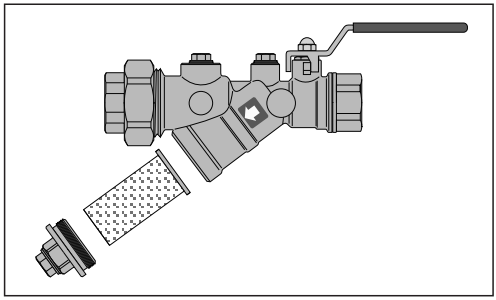



Backflushing it (having the water flow backwards through the screen). This is done by closing the supply isolation valve before opening the blowdown valve.




**Inspecting the strainer**

The strainer cartridge is assembled to permit easy removal from the body for inspection or replacement.



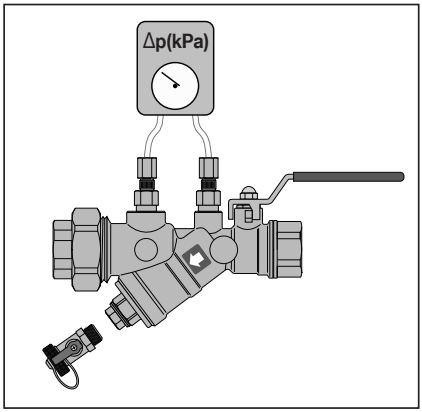
# NOTES

## NOTES

### Pressure and temperature testing

The FowCal™ Y-strainer comes standard with connections for the pressure and temperature test ports to read the pressure difference between inlet and outlet. This is useful when checking for strainer clogging.

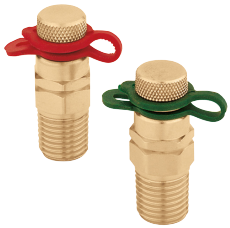
In addition, drain valve (538202 FD - 1/4"NPT; 538402 FD-1/2" NPT) can be connected for blowdown.




## 100001A PT test ports

Fast-plug pressure/temperature test ports for FlowCal™ Y-strainers.
Their special construction enables rapid and accurate measurements without the need to leave expensive test equipment inline. The double-sealing core insures long and trouble-free service.

Can be used for:
- Y-strainer
- checking for strainer clogging



Low-lead brass body.
Nordel Core.
Connections:
¼" NPT male.
Cap thread:
3/8" - 24 UNF.
Overall length: 1½"
Working temperature range: 0–275°F (-18 135°C).
Max. working pressure: 35 psi (30 bar).
Package includes a pair (2 ports included).

## 538 Drain valve

Drain valve with ¾ inch garden hose connection.
Order code:

| | |
|---|---|
| 538202 FD | ¼" NPT fits ½ - ¾" 120 series |
| 538402 FD | ½" NPT fits 1 - 1¼" 120 series |

**LEAVE THIS MANUAL WITH THE USER.**

**Laissez ce manuel à la disposition de l'utilisateur.**

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