

# Differential Pressure By-Pass Valve

519 Series

Submittal Data 02901 NA - Issue Date 03/2010



## Application

The differential pressure by-pass valve is used in systems with a fixed speed circulating pump supplying several zones controlled by two way zone valves. This valve ensures that the head pressure of the pump is proportional to the number of two way valves being closed. It will bypass the differential pressure created by the pump as the zone valves close, thus eliminating water hammer noise.

## Typical Specification

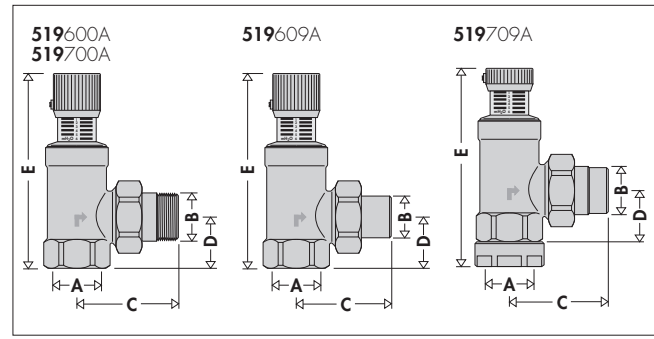
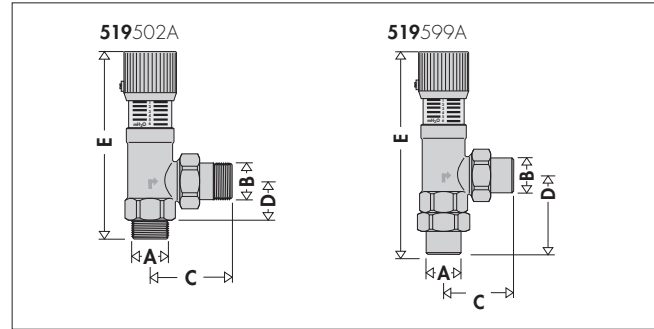
Furnish and install on the plans and described herein, a Caleffi differential pressure by-pass valve as manufactured by Caleffi. Each valve must be designed with a brass body, brass valve plug, EPDM valve plug gasket, EPDM O-Ring seals, asbestos free NBR union seals, ABS control knob, and a stainless steel spring. (See product instructions for specific installation information.)

## Technical Data

Materials:

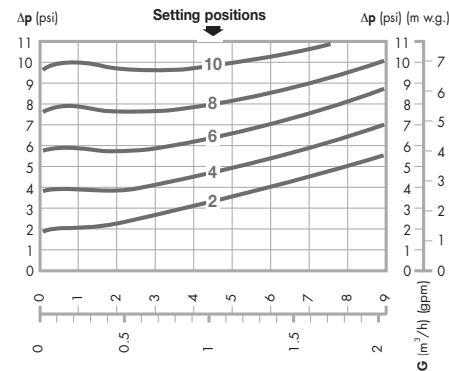
|                           |   |
|---------------------------|---|
| Body:                     | brass   |
| Valve plug:               | brass   |
| Valve plug gasket:        | EPDM  |
| O-Ring seals:             | EPDM  |
| Union seals:              | asbestos free NBR   |
| Control knob:             | ABS   |
| Spring:                   | stainless steel   |
| Medium:                   | water, glycol solutions   |
| Max percentage of glycol: | 30%   |
| Temperature range:        | 32–230°F (0–110°C)  |
| Maximum working pressure: | 150 psi (10 bar)  |
| Flow rates:               | 3/4" flow up to 9 gpm<br>1" flow up to 40 gpm<br>1 1/4" flow up to 45 gpm |
| Setting range:            | 1 - 6 m w.g. (2 - 10 psi)   |

## Dimensions

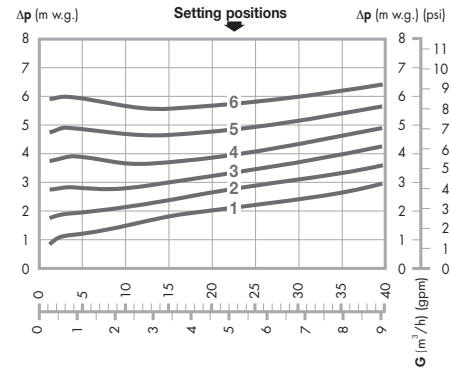


| Code    | A           | B           | C        | D        | E       | Weight (lb) | (kg) |
|---------|-------------|-------------|----------|----------|---------|-------------|------|
| 519502A | 3/4" MNPT   | 3/4" MNPT   | 2 1/4"   | 1 7/8"   | 5"      | 1.0         | 0.5  |
| 519599A | 3/4" SWT    | 3/4" SWT    | 2 1/8"   | 2 1/2"   | 5 9/16" | 1.0         | 0.5  |
| 519600A | 1" FNPT     | 1" MNPT     | 3 13/16" | 2 1/16"  | 6 5/8"  | 1.4         | 0.6  |
| 519609A | 1" FNPT     | 1" SWT      | 2 13/16" | 2 1/16"  | 6 5/8"  | 1.4         | 0.6  |
| 519700A | 1 1/4" FNPT | 1 1/4" MNPT | 3 15/16" | 2 11/16" | 7 3/8"  | 1.5         | 0.7  |
| 519709A | 1 1/4" FNPT | 1 1/4" SWT  | 3"       | 2 11/16" | 7 3/8"  | 1.5         | 0.7  |

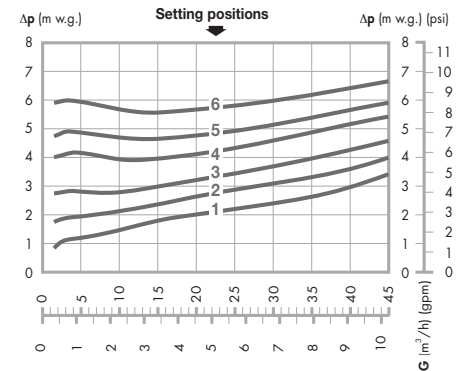
code 519502A - 519599A (3/4")



code 519600A - 519609A (1")



code 519700A - 519709A (1 1/4")



We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice. Contractors should request production drawings if prefabricating the system.

Job name .....  
 Job location .....  
 Engineer .....  
 Mechanical contractor .....  
 Contractor's P.O. No. ....  
 Representative .....

Size .....  
 Quantity .....  
 Approval .....  
 Service .....  
 Tag No. ....  
 Notes .....