

# 418D

Non-return ball valve

B system

## Technical Data Sheet



## Description

The closing system of the 418D non-return valve is a self cleaning ball, lifted by the fluid and guided to a lateral seat, completely out of the way. This system provides a full-flow, even with loaded fluids, without any risk of blockage.

- Vertical ascending and horizontal operation (position of the ball above the axis of the pipe)
- Minimum head loss
- Silent, robust
- Non incrustating materials
- Sealing guaranteed by the coating of the ball
- Degassing system by lifting of the ball (under a max pressure of 1 bar)



## 418D

Non-return ball valve - B system

| DN    | PN  | PFA in bar | PS in bar |    |     |    | Cat. | Ref.             | Weight Kg |
|-------|-----|------------|-----------|----|-----|----|------|------------------|-----------|
|       |     |            | L1        | L2 | G1  | G2 |      |                  |           |
| 2     | 50  | 10/16      | 10        | 10 | 10  | 10 | I    | <b>149B3140D</b> | 5,5       |
| 2 1/2 | 65  | 10/16      | 10        | 10 | 10  | 10 | I    | <b>149B3141D</b> | 9,1       |
| 3     | 80  | 10/16      | 10        | 10 | 10  | 10 | I    | <b>149B3142D</b> | 13,3      |
| 4     | 100 | 10/16      | 10        | 10 | 10  | 10 | I    | <b>149B3143D</b> | 20,9      |
| 5     | 125 | 10/16      | 10        | 10 | 0,5 | 10 | I    | <b>149B3144D</b> | 27,5      |
| 6     | 150 | 10/16      | 10        | 10 | 0,5 | 10 | I    | <b>149B3145D</b> | 35,7      |
| 8     | 200 | 10         | 10        | 10 | 0,5 | 10 | I    | <b>149B3146D</b> | 63,7      |

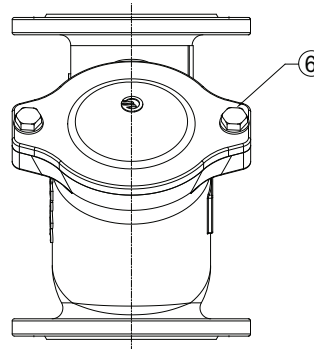
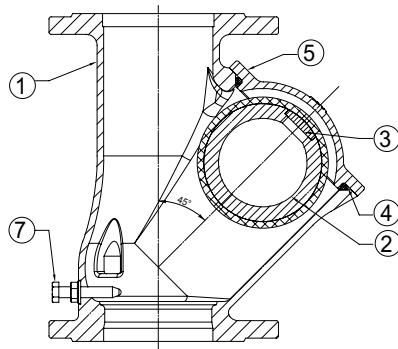
### Important notice :

The indicated pressure for the different categories of fluids (L1/L2/G1/G2) is under no condition a guarantee of use. Therefore, it is essential to validate the use of products under given operating conditions. The operating instructions are available on our website [www.socla.com](http://www.socla.com) or by requesting from our sales department.

### Technical features

|   |                                |
|---|--------------------------------|
| Operating temperature                           | -10 °C to 80 °C                |
| Permissible operating pressure (PFA) in water   | See table above                |
| Maximum permissible pressure (PS) other mediums | See table above                |
| Connection                                      | Flanges drilled PN (see table) |
| Mediums   | Wasted water, loaded liquids   |

### Nomenclature and materials



| N° | Description          | Materials                             |
|----|----------------------|---------------------------------------|
| 1  | Body                 | Epoxy coated cast iron                |
| 2  | Ball                 | DN 50 to 100<br>FKM coated aluminium  |
|    |                      | DN 125 to 200<br>FKM coated cast iron |
| 3  | Plug                 | Steel                                 |
| 4  | Seal                 | NBR                                   |
| 5  | Cover                | Epoxy coated cast iron                |
| 6  | Screw-washer (cover) | Stainless steel                       |
| 7  | Bleeding screw       | Stainless steel                       |

## Approvals



### International construction Standards :

Directive 2014/68/UE  
Regulation 305/2011/UE, EN12050-4  
Flange drilling according to EN 1092-2  
Length according to EN558 48 serie

## Application

Degassing, wasted water, loaded liquids.

## Installation

### Installation :

Before putting valve into operation, check that:

- the working conditions are compatible with the details given on the identification plate, the instruction notice and the manufacturer's detail,
- the valve works effectively when tried (carry out a few opening and closing operations of the closing system),
- the valve is free-pollution inside.

On a new installation or after maintenance, the circuit must be rinsed with the valve completely open in order to remove solid matter which may damage the internal parts of the valve.

### Commissioning :

The installation should be put under pressure progressively to avoid damage which might occur to internal components. Make sure that when flow stops the valve maintains pressure well and that there is no water-hammer which might damage the valve or installation. If there is water-hammer, an anti-water hammer system must be added to the installation.

During a prolonged stoppage, a change in the state of the fluid may result in damage when the installation is brought back into service (solidification...). Establish an adequate procedure program for cleaning the system.

## Maintenance

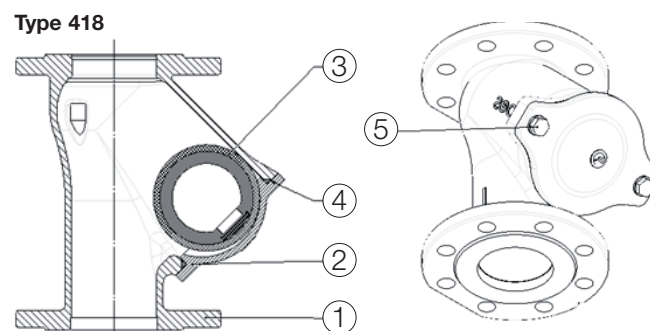
### • Removing :

1. Unscrew the support screw assembly (N°5)
2. Remove the cover (N°2)
3. Remove the O-ring (N°4)
4. Tip over the body (N°1) for remove the ball (N°3)

### • Reassembly :

Before reassembling the valve, check the condition of the seal. If necessary, clean and grease it by using appropriate grease.

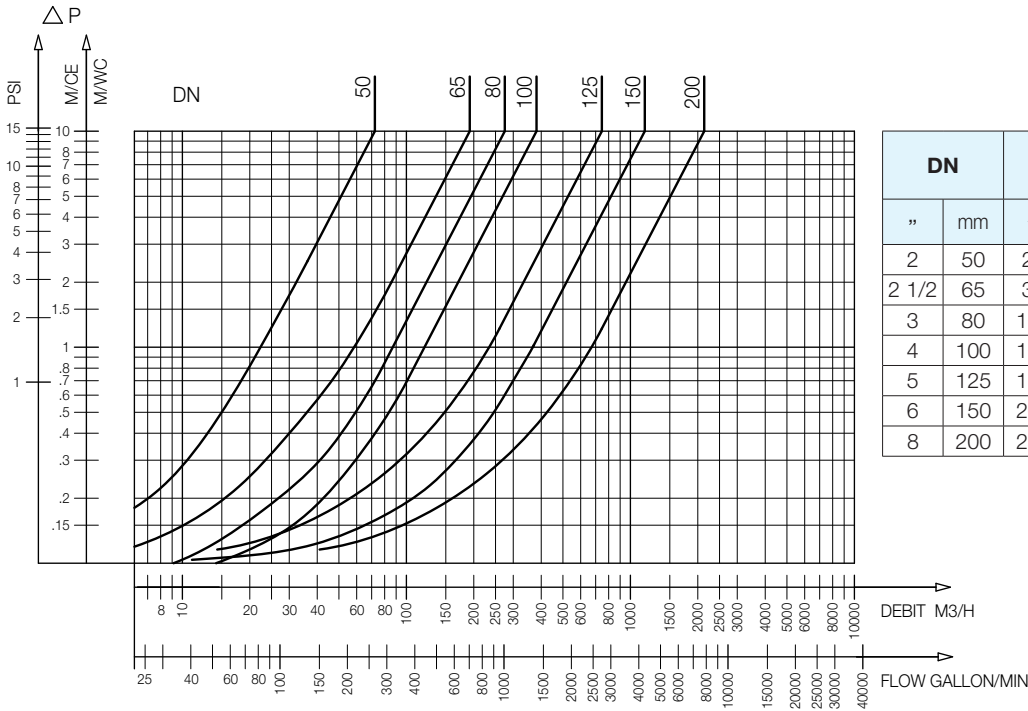
1. Place the ball (N°3) in the body (N°1)
2. Put in place the O-ring (N°4) on the cover (N°2)
3. Put in place the cover (N°2) on the body (N°1)
4. Tighten the screw assembly (N°5) to the contact and then :
  - a. Tighten to the couple of 35 Nm for the FIG.418 up to DN100 included
  - b. Tighten with a suitable tool for the others references



# Operation

## Direction for use :

- Solid line: Valve completely open

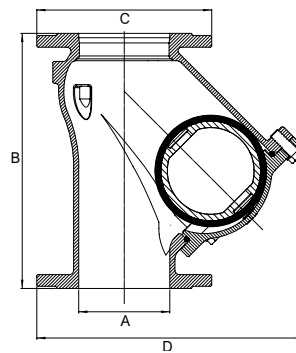


| DN    |     | Opening pressure in mm/CE |           | Kv<br>m <sup>3</sup> /H | ζ    |
|-------|-----|---------------------------|-----------|-------------------------|------|
| "     | mm  | ↑                         | ↔         |                         |      |
| 2     | 50  | 25                        | Near to 0 | 72,3                    | 1,90 |
| 2 1/2 | 65  | 30                        |           | 192,4                   | 0,77 |
| 3     | 80  | 160                       |           | 275,8                   | 0,86 |
| 4     | 100 | 160                       |           | 381,0                   | 1,10 |
| 5     | 125 | 170                       |           | 746,4                   | 0,70 |
| 6     | 150 | 200                       |           | 1161,0                  | 0,60 |
| 8     | 200 | 250                       |           | 2136,3                  | 0,56 |

418D - Headloss chart

# Sizing

| A   | B   | C   | D   |
|-----|-----|-----|-----|
| mm  | mm  | mm  | mm  |
| 50  | 200 | 165 | 173 |
| 65  | 240 | 185 | 214 |
| 80  | 260 | 200 | 252 |
| 100 | 300 | 220 | 289 |
| 125 | 350 | 250 | 368 |
| 150 | 400 | 285 | 424 |
| 200 | 500 | 340 | 509 |



418D

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