# 418/408

Non-return valves with ball, flanged

System B

## Technical Data Sheet



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# Description

The non-return valves with ball, flanged 418/408 consists of a self-cleaning ball lifted by the fluid and guided to a lateral seat, completely out of the way. This system provides a full bore, even with loaded fluids, without any risk of blockage.

- Vertical ascending and horizontal position (position the ball housing above the axis of the pipe)
- Minimum head loss
- Silent, robust
- Non incrustating materials
- Sealing guaranteed by the coating of the ball



418



408

## 418/408

Non-return valves with ball, flanged - System B

| DN | | PN | PFA in bar | PS in bar | | | | Cat | Ref. | Weight Kg |
|---|---|---|---|---|---|---|---|---|---|---|
| " | mm | | | L1 | L2 | G1 | G2 | | | |
| 2 | 50 | 10/16 | 10 | 10 | 10 | 10 | 10 | I | **149B3140** | 5,5 |
| 2 1/2 | 65 | 10/16 | 10 | 10 | 10 | 10 | 10 | I | **149B3141** | 9,1 |
| 3 | 80 | 10/16 | 10 | 10 | 10 | 10 | 10 | I | **149B3142** | 13,3 |
| 4 | 100 | 10/16 | 10 | 10 | 10 | 10 | 10 | I | **149B3143** | 20,9 |
| 5 | 125 | 10/16 | 10 | 10 | 10 | 0,5 | 10 | I | **149B3144** | 27,5 |
| 6 | 150 | 10/16 | 10 | 10 | 10 | 0,5 | 10 | I | **149B3145** | 35,7 |
| 8 | 200 | 10 | 10 | 10 | 10 | 0,5 | 10 | I | **149B3146** | 63,7 |
| 10 | 250* | 10 | 10 | 10 | 10 | 0,5 | 10 | I | **149B2907** | 128,9 |
| 12 | 300* | 10 | 10 | 10 | 10 | 0,5 | 10 | I | **149B2908** | 220,1 |
| 14 | 350* | 10 | 10 | 10 | 10 | 0,5 | 10 | I | **149B2909** | 345,6 |

*Type 408

Options: Specific coating and flanges drilling, thickness 250µm, from DN 80 to DN350 different ball weights are sometime necessary to prevent vibration and water hammer , stainless steel screws A4, materials ... consult us

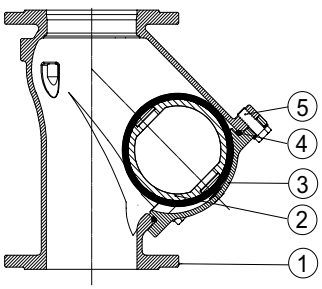
**Important notice :**

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.

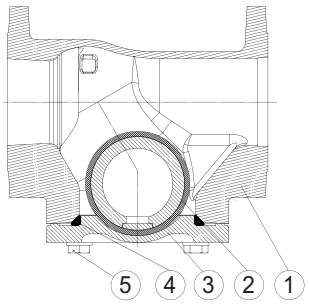
| Technical features | |
|---|---|
| Operating temperature | -10 °C to 80 °C |
| Permissible operating pressure (PFA) in water | See table above |
| Maximum permissible pressure (PS) other mediums | See table above |
| Connection | Flanges drilled PN (see table) |
| Mediums | Waste water, viscous liquids,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

## Nomenclature and materials

**Type 418**




**Type 408**




| N° | Description | | Materials |
|---|---|---|---|
| 1 | Body | | Ductile iron / Epoxy |
| 2 | Ball | DN 50 to 100 | Aluminium / NBR |
| | | DN 125 to 350 | Cast iron / NBR |
| 3 | Cover | | Ductile iron / Epoxy |
| 4 | Seal | | NBR |
| 5 | Screw-washer | | Stainless steel A2 |

Option : the component list may be substituted with equivalent or higher class materials without prior notification.

# Approvals

PED 2014/68/UE
CPR 305/2011/UE

**International construction Standards :**

Directive 2014/68/UE
CE Conformity Regulation 305/2011/UE Standard EN12050-4
Flange drilling according to EN558
Length according to EN558 series 48 (except DN 350 : type 408)
Ductile iron body EN-GJS 400-15
Tightness : Category A according to ISO 5208

**Tests :**

Hydraulic test according to EN 12050-4

# Application

The non-return valves with ball, flanged 418/408 designed in accordance with EN 12050-4, provide optimum protection for pump at the discharge station against the backflow of waste water and charged or viscous fluids, sanitation.

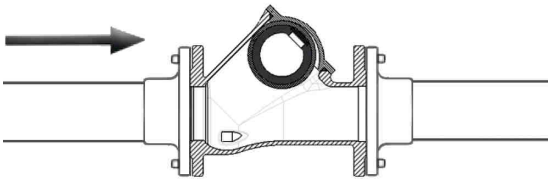
# Installation

**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.

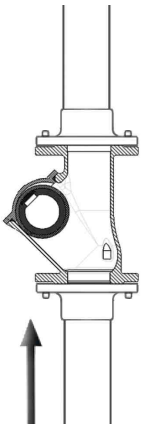
On a new installation or after maintenance, the circuit must be rinsed with the valve completely open in order to remove solid matter which may damage the internal parts of the valve.



**Horizontal position :**

If there is no pressure in the network, the horizontal installation requires a fluid speed from 1 to 1.5 m/s.

A 1 bar back pressure is needed to avoid noise nuisance and water hammer at the closing of the valve.



**Upright position :**

The maximum recommended speed for the fluid is 2-3 m/s.

**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 :**

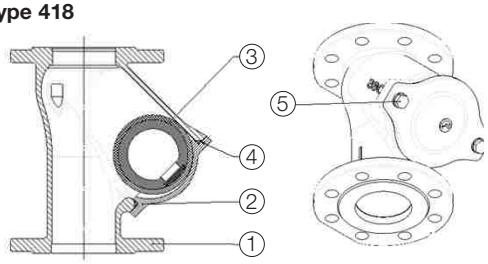
1. Unscrew the support screw assembly (N°5)
2. Remove the cover (N°2)
3. Remove the O-ring (N°4)
4. Tip over the body (N°1) for remove the ball (N°3)

**• Reassembly :**

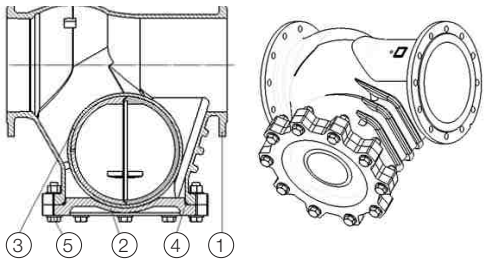
Before reassembling the valve, check the condition of the seal. If necessary, clean and grease it by using appropriate grease.

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

**Type 418**



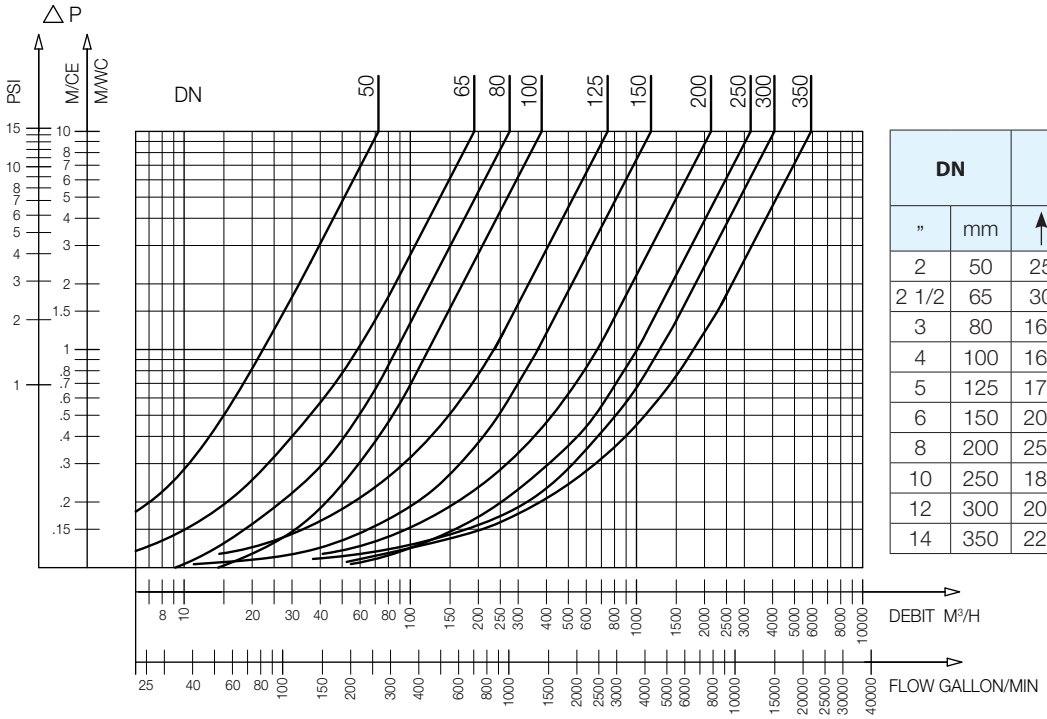

**Type 408**



# Operation

**Direction for use :**

• Solid line: Valve completely open




**418/408 -** Headloss chart

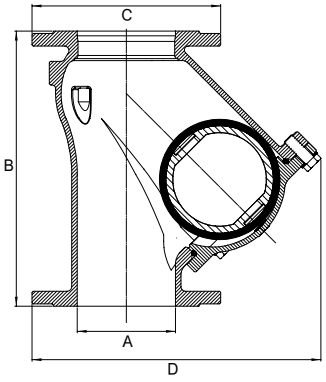
| DN | | Opening pressure in mm/CE | | Kv | ζ |
|---|---|---|---|---|---|
| " | mm | ↑ | ↔ | m³/H | |
| 2 | 50 | 25 | Near to 0 | 72,3 | 1,90 |
| 2 1/2 | 65 | 30 | | 192,3 | 0,77 |
| 3 | 80 | 160 | | 275,8 | 0,86 |
| 4 | 100 | 160 | | 381,0 | 1,10 |
| 5 | 125 | 170 | | 746,4 | 0,70 |
| 6 | 150 | 200 | | 1161,0 | 0,60 |
| 8 | 200 | 250 | | 2136,3 | 0,56 |
| 10 | 250 | 180 | | 3198,2 | 0,61 |
| 12 | 300 | 200 | | 4153,4 | 0,75 |
| 14 | 350 | 220 | | 5861,6 | 0,70 |

# Sizing

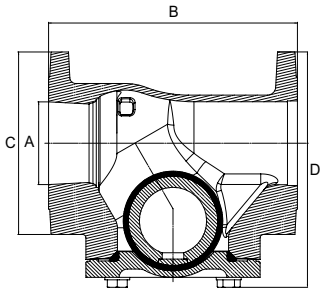
| DN A | | B | C | D |
|---|---|---|---|---|
| " | mm | mm | mm | mm |
| 2 | 50 | 200 | 165 | 173 |
| 21/2 | 65 | 240 | 185 | 214 |
| 3 | 80 | 260 | 200 | 252 |
| 4 | 100 | 300 | 220 | 289 |
| 5 | 125 | 350 | 250 | 368 |
| 6 | 150 | 400 | 285 | 424 |
| 8 | 200 | 500 | 340 | 509 |
| 10** | 250 | 600 | 400 | 582 |
| 12** | 300 | 700 | 455 | 721 |
| 14** | 350 | 875 | 505 | 820 |

**Type 408

Width between flanges according to EN 558-1 series 48 except DN 350




**Type 418**




**Type 408**

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