

402 WG

Non-return axial guided valve

02 System

Technical Data Sheet

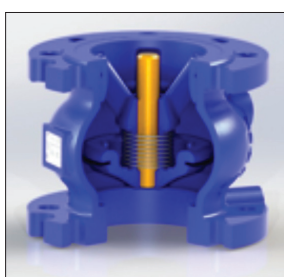


Description

A non-return valve is compatible with many types of fluids and can be adapted to a wide range of installations. However, each of these installations comes with their own particular constraints : mechanical, hydraulic, physical or chemical. The 02 system offers the best compromise between hydraulic performance, ruggedness, sealing-tightness and cost effectiveness with any kind of liquids (subject to a validation of our recommendation service).

Our valves meet the requirements of the Pressure Equipment Directive 2014/68/UE. This range extends from 40 to 500 mm.

- **Internal and external Epoxy coating** of 250µm minimum increasing resistance to corrosion
- **Hydraulic shape** means very little energy loss
- Excellent sealingtightness ensured by **an EPDM seal**
- **Bronze guide ring** enables a better movement of the closing system and preventing premature wear
- **Stainless steel spring** allowing system to function in any position
- **Bosses drilled** on request for by-pass, control or evacuation
- **Passage for cables** of submersible pumps



402 WG

Axial guided non-return valve - 02 System

| DN in mm | PN | PFA in bar | PS in bar | | | | Cat. | Ref. | Weight Kg |
|-------------|-------|---------------|-----------|----|-----|----|------|-------------------|--------------|
| | | | L1 | L2 | G1 | G2 | | | |
| 40 | 10/16 | 16 | 16 | 16 | 16 | 16 | I | 149B2281IE | 4,2 |
| 50 | 10/16 | 16 | 16 | 16 | 16 | 16 | I | 149B2282IE | 5,8 |
| 65 | 10/16 | 16 | 16 | 16 | 15 | 16 | I | 149B2283IE | 8,1 |
| 80 | 10/16 | 16 | 16 | 16 | 12 | 16 | I | 149B2284IE | 10,2 |
| 100 | 10/16 | 16 | 16 | 16 | 10 | 16 | I | 149B2285IE | 14,5 |
| 125 | 10/16 | 16 | 16 | 16 | 0,5 | 16 | I | 149B2226IE | 24 |
| 150 | 10/16 | 16 | 13 | 16 | 0,5 | 16 | I | 149B2227IE | 32 |
| 200 | 10 | 10 | 10 | 10 | 10 | 10 | II | 149B2229IE | 53 |
| 250 | 10 | 10 | 10 | 10 | 10 | 10 | II | 149B2230IE | 94 |
| 300 | 10 | 10 | 10 | 10 | 10 | 10 | II | 149B2231IE | 140 |
| 350 | 10 | 10 | 10 | 10 | 0,5 | 10 | II | 149B2232IE | 225 |
| 400 | 10 | 10 | 10 | 10 | 0,5 | 10 | II | 149B2233IE | 312 |
| 500 | 10 | 10 | 10 | 10 | 0,5 | 10 | II | 149B2235IE | 540 |

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.

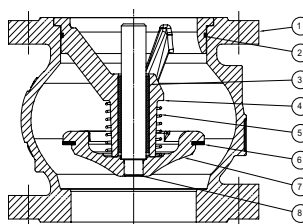
The operating instructions are available on our web site www.socla.com or by requesting from our sales department.

Technical features

| | |
|---|---|
| Operating temperature | -10°C to 80°C, for temperatures over 80°C, consult us |
| 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 | Clear liquids, gas |

Nomenclature and materials

| N° | Description | Materials |
|-----|----------------|---|
| 1 | Casing | DN 40-400 Cast iron/Epoxy DN 500 Cast iron/Epoxy |
| 2 | O-ring seal | DN 40-250 EPDM |
| 3 | Ring | Bronze |
| 4 | Guide | DN 50 Bronze DN 40 & 60-400 Cast iron/Epoxy DN 500 Cast iron/Epoxy |
| 5 | Spring | Stainless steel |
| 6 | Seal | EPDM |
| | | DN 40 Brass DN 50-65 Bronze |
| 7-8 | Closing system | DN 80-400 Stem Bronze Check-valve Cast iron/Epoxy DN 500 Stem Bronze Check-valve Cast iron/Epoxy |



Approvals

This new non-return valve meets technical prescriptions requirements of the Belgian water market intended for human consumption:

- TV/034/1-B and TV/092/2-B
- TV/031/1-A (SVW) and TV/041/1-A (SVW) of AquaFlanders (Flanders and Wallonia water company)

ACS kiwa

Construction standards:

CE Conformity Directive 2014/68/UE
Flange drilling according to EN1092-2

Approval:

Water companies

Application

The non-return valve 402 WG SOCLA is the most universal for water supply, pumps protection, general circuits, boosters and water distribution. It can be installed in any position with clear 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. Remove guide assembly (N°2)
2. Remove the o-ring seal (N°5) from its groove
3. Remove the spring (N°4)
4. Remove all the closing system (N°3)

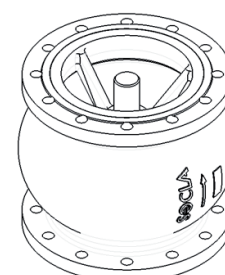
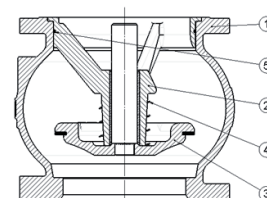
• Reassembly:

Make sure that the seal is in a good condition before reassembly the valve.

Clean and lubricate it if necessary with a suitable product.

1. Put all the closing system (N°3) into the casing (N°1)
2. Insert the spring (N°4)
3. Put the o-ring seal (N°5) in its groove
4. Insert the guide assembly (N°2). This step may require to use a press.

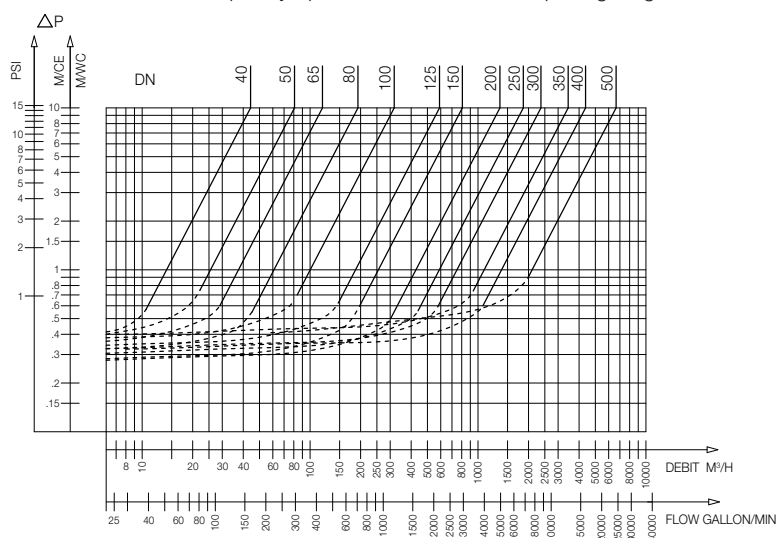
Once the reassembly done, test the device in order to check its sealing.



Operation

Direction for use:

- Solid line : Valve completely open
- Dotted line : opening stage of valve

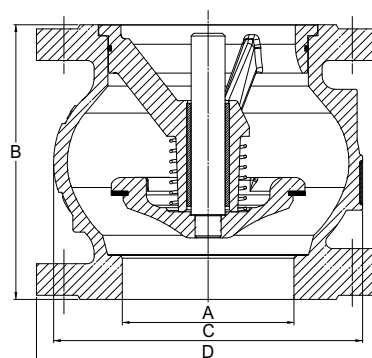


402 WG - Headloss chart

| DN | Opening pressure in mm/CE | | | | Kv m³/H | ζ |
|-----|------------------------------|-----|-----|-------------------|------------|------|
| mm | ↑ | ↓ | ↔ | Without spring | | |
| 40 | 440 | 210 | 320 | 120 | 44,2 | 2,10 |
| 50 | 440 | 220 | 330 | 110 | 80,8 | 1,50 |
| 65 | 450 | 190 | 320 | 130 | 118,5 | 2,00 |
| 80 | 450 | 190 | 320 | 130 | 192,8 | 1,80 |
| 100 | 500 | 240 | 370 | 130 | 318,0 | 1,60 |
| 125 | 510 | 210 | 360 | 150 | 590,0 | 1,10 |
| 150 | 550 | 210 | 380 | 170 | 807,5 | 1,25 |
| 200 | 590 | 210 | 400 | 190 | 1351,0 | 1,40 |
| 250 | 710 | 210 | 460 | 250 | 1861,8 | 1,80 |
| 300 | 820 | 90 | 460 | 365 | 2371,7 | 2,30 |
| 350 | 860 | 100 | 480 | 380 | 3444,7 | 2,00 |
| 400 | 800 | 50 | 410 | 390 | 4371,2 | 2,14 |
| 500 | 1030 | 0 | 430 | 580 | 6646,2 | 2,26 |

Sizing

| A | B | C | D |
|-----|-----|-----|-----|
| mm | mm | mm | mm |
| 40 | 85 | 80 | 150 |
| 50 | 100 | 97 | 165 |
| 60 | 120 | 125 | 185 |
| 80 | 140 | 150 | 200 |
| 100 | 170 | 187 | 220 |
| 125 | 200 | 220 | 250 |
| 150 | 230 | 250 | 285 |
| 200 | 289 | 340 | 340 |
| 250 | 354 | 420 | 405 |
| 300 | 396 | 490 | 460 |
| 350 | 473 | 586 | 533 |
| 400 | 560 | 680 | 597 |
| 500 | 750 | 880 | 670 |

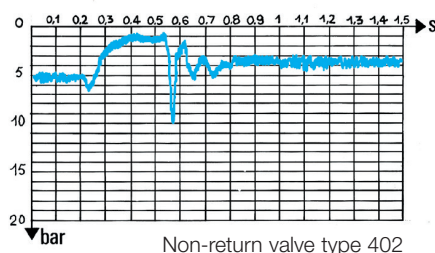


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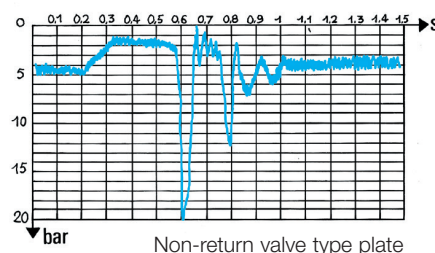
Other technical information

Dynamic closing characteristics:

An overpressure of 5 bar is measured at the backing non-return valve 402 in DN 150 mm when the pump stops, for a initial flow of 150m³/h under 5 bar (according to the tests realized by the CETIM).



Non-return valve type 402



Non-return valve type plate

The descriptions and photographs contained in this product specification sheet are supplied by way of information only and are not binding.

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