

INSTALLATION AND OPERATING MANUAL FOR FLANGED DISC CHECK VALVES

Cast iron axial disc check valve for drinking water, heating and water distribution.

Cast iron EN GJL-250 body coated with anti-corrosion epoxy painting, ductile iron disc and EPDM seat.

All positions thanks to the stainless steel spring.



Size : DN50 to DN600

Connection : Between flanges PN10/16 RF

Min Temperature : -10°C

Max Temperature : +120°C

Max Pressure : 16 Bars up to DN300 (10 bars over)

Specifications : Disc type
All positions
Stainless steel spring
Epoxy painting
Weak headloss

Materials : Cast iron EN GJL-250 body or ductile EN GJS-400-15

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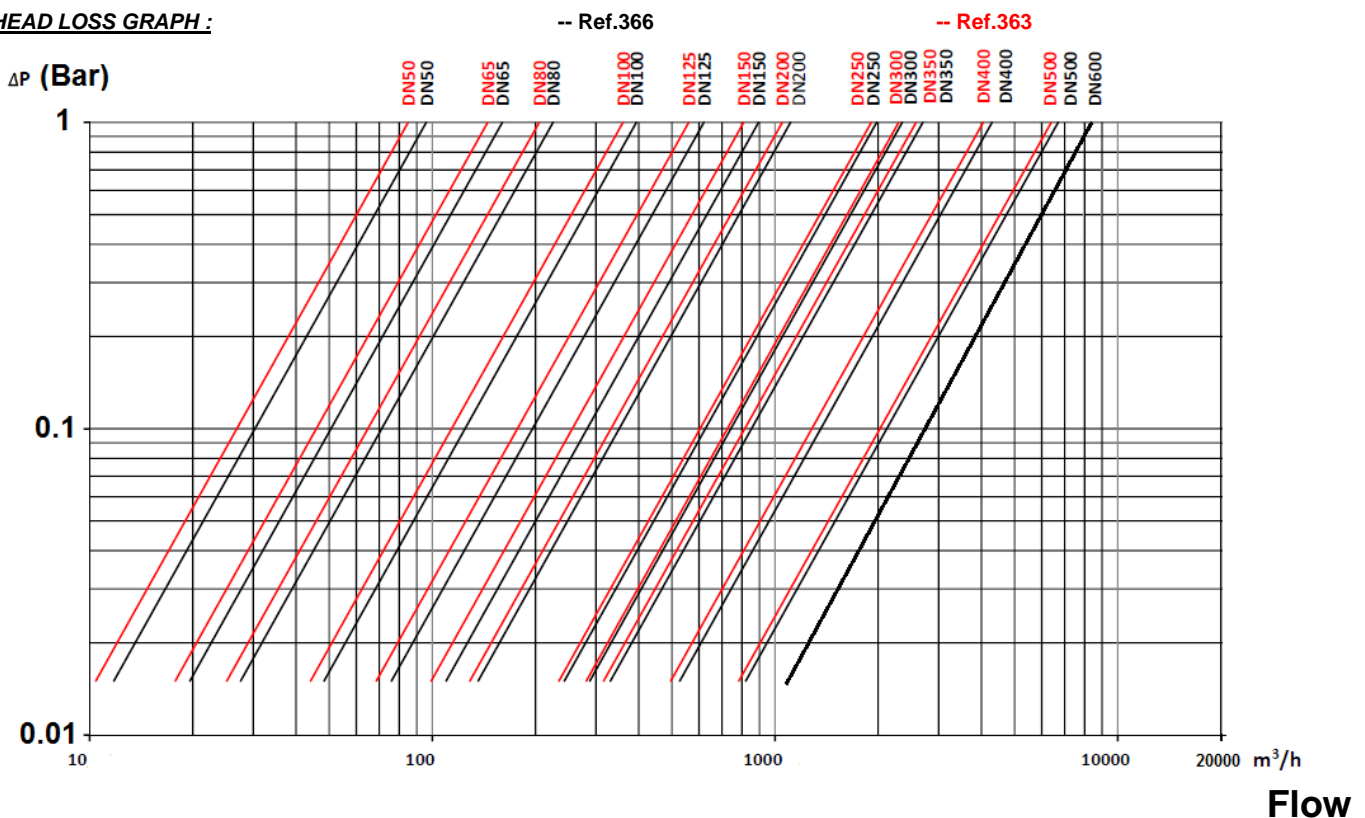
SPECIFICATIONS :

- All positions thanks to the stainless steel spring
- Respect the flow direction indicated by an arrow on the body
- Flanges R.F. PN10/16 up to DN150, PN16 from DN200 to DN300, PN10 over
- Weak head loss thanks to the cylindrical internal designing
- Anti-corrosion epoxy internal and external painting blue color RAL 5017, 100 µ thickness
- Bronze bushing to avoid blocking of the disc
- Drilled boss on request for bypass or to check the thickness
- Disc designed for a better hydrodynamism
- Silent solution
- Minimum back pressure for tightness : 0.2 bars

USE :

- Water distribution
- Min Temperature Ts : - 10°C
- Max Temperature Ts :+ 120°C
- Max Pressure Ps : 16 bars up to DN300, 10 bars over
- Max speed between 2m/s and 6m/s max

HEAD LOSS GRAPH :



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FLOW COEFFICIENT Kvs (in m³/h) :

Ref.	DN	50	65	80	100	125	150	200	250	300	350	400	500	600
366	Kv (m ³ /h)	96	160	225	394	620	895	1110	1980	2350	2700	4300	6300	8400
363	Kv (m ³ /h)	86	143	201	351	553	801	980	1750	2115	-	-	-	-

OPENING PRESSURE (mbar) :

DN	Vertical Position ascending fluid	Horizontal Position
DN 50	55 ↑	40 →
DN 65	52 ↑	35 →
DN 80	52 ↑	34 →
DN 100	53 ↑	35 →
DN 125	65 ↑	46 →
DN 150	66 ↑	48 →
DN 200	76 ↑	55 →
DN 250	91 ↑	62 →
DN 300	90 ↑	58 →
DN 350	91 ↑	59 →
DN 400	106 ↑	70 →
DN 500	114 ↑	72 →
DN 600	155 ↑	92 →

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GENERAL GUIDELINES :

- Ensure that the check valves to be used are appropriate for the conditions of the installation (type of fluid, pressure and temperature).
- Be sure to have enough valves to be able to isolate the sections of piping as well as the appropriate equipment for maintenance and repair.
- Ensure that the valves to be installed are of correct strength to be able to support the capacity of their usage.

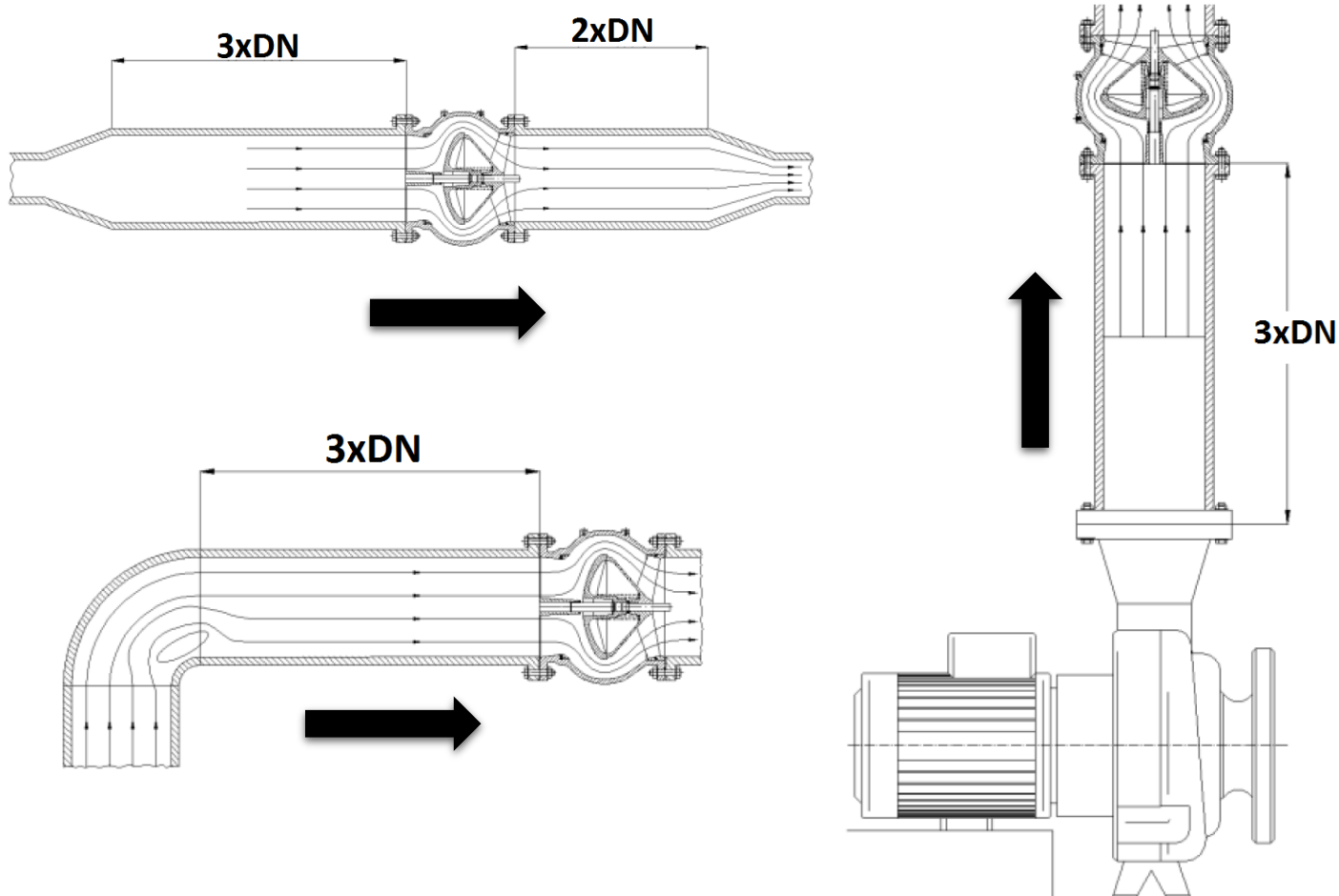
INSTALLATION INSTRUCTIONS :

- **Before installing the check valves, clean and remove any objects from the pipes** (in particular bits of sealing and metal) which could obstruct and block the valves.
- Flanges faces must be clean and without damaged
- **Ensure that both connecting pipes either side of the check valve (upstream and downstream) are aligned (if they're not, the valves may not work correctly).**
- **Make sure that the two sections of the pipe (upstream and downstream) match, the check valve unit will not absorb any gaps. Any distortions in the pipes may affect the tightness of the connection, the working of the check valve and can even cause a rupture.** To be sure, place the kit in position to ensure the assembling will work.
- **If sections of piping do not have their final support in place, they should be temporarily fixed. This is to avoid unnecessary strain on the check valve.**
- Respect the flow direction indicated by the arrow
- Ensure there is enough space after the check valve so that the disc could be opened in total opening position
- Bolting should be tighten in cross

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INSTALLATION :

- After a pump please refer to **FD CEN/TR 13932** to install the check valve :
 - If it is essential to keep priming the pump, a non-return check valve can be fitted to the suction pipe at a distance **L1 (straight length suction) > 10xD1 (diameter suction)**
The check valve is designed to meet the maximum flow rate in service
 - In other cases, the non-return check valve is mounted on the discharge pipe at a distance of **L2 (straight length at discharge) > 3xD2 (diameter at discharge)**
- If there is a direction changing or if there's another material, it's better to take away the check valve so that it is outside the turbulence area (**between 2 and 3 times the ND before and after according to drawing below**).



ADVICE : Our opinion and our advice are not guaranteed and SFERACO shall not be liable for the consequences of damages. The customer must check the right choice of the products with the real service conditions.