

# NEPTUNIA N1C - DUO check valve 2-24"

## Description

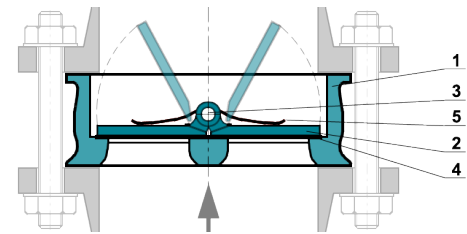
DUO check valve, for mounting directly between flanges according to DIN. Maintenance not required. For liquids and gases in the industrial range, general services, water treatment. Not suitable for media with solid components.

## Product features

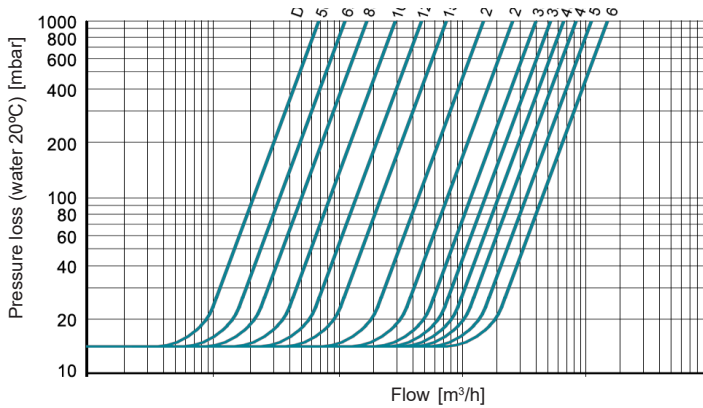
- Body construction Wafer
- Max. working pressure 232 psi
- Rating PN 10, PN 16, other ratings on request
- Face to face dimension according to DIN EN 558-1
- Temperature range 14°F to 392°F

## Construction

1	Body
2	Plate
3	Shaft
4	Seals
5	Spring

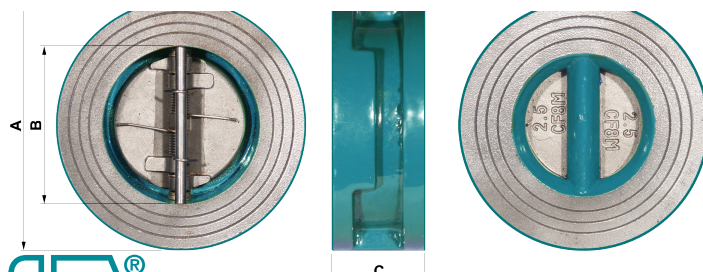


## Hydraulic characteristics



Inch	Cv-value [US gpm]	Min. opening pressure [psi]		
		←→	↑	↓
2	73.1	0.218	0.290	0.023
2½	126.4	0.218	0.290	0.145
3	199.5	0.218	0.290	0.145
4	335.2	0.218	0.290	0.145
5	552.2	0.218	0.290	0.145
6	870.0	0.218	0.290	0.145
8	1,798.0	0.218	0.290	0.145
10	3,340.8	0.218	0.290	
12	4,756.0	0.218	0.290	
14	6,117.8	0.218	0.290	
16	9,570.0	0.218	0.435	
18	12,238.0	0.218	0.435	
20	16,820.0	0.218	0.435	
24	27,840.0	0.218	0.435	

## Dimensions



Inch	A PN 10	A PN 16	B	C	Weight [lb]
2	4.21	4.21	2.78	1.69	3.5
2½	5	5	3.15	1.81	5.3
3	5.59	5.59	3.7	2.52	7.9
4	6.38	6.38	4.61	2.52	10.1
5	7.56	7.56	5.71	2.76	15.4
6	8.58	8.58	6.69	2.99	20.3
8	10.75	10.75	8.7	3.5	33.5
10	12.91	12.91	10.85	4.49	57.3
12	14.88	15.08	12.81	4.49	75.0
14	17.24	17.48	14.17	5	127.9
16	19.25	19.49	16.14	5.51	165.3
18	21.22	21.85	18.39	5.98	216.1
20	23.39	24.29	20.28	5.98	275.6
24	27.36	28.9	24.57	7.01	399.0



Member of the AVK Group

## Type code

N1C	100	. 3	3 -	4C0	. 4C0	. N
①	②	③	④	⑤	⑥	⑦

① Type	N1C	DUO check valve - wafer type			2-24"	
② Nominal diameter	050-600	mm (2-24 inch)			≤ 36" on request	
③ Working pressure	2	145 psi			12-36"	
	3	232 psi			2-10"	
④ Rating	2	PN 10				
	3	PN 16				
		other ratings on request				
⑤ + Execution		<b>Body</b>	<b>Disc</b>	<b>Shaft</b>	<b>Spring</b>	
	2AE.2AN	Ductile iron EN-GJS-400-15, Epoxy coated, min. 80 µm	Ductile iron EN-GJS-400-15, nickel plated	Stainless steel 1.4401, ~AISI 316	Stainless steel 1.4571, ~AISI 316Ti	> 12"
	2AE.4C0	Ductile iron EN-GJS-400-15, Epoxy coated, min. 80 µm	Stainless steel 1.4408, ~CF8M	Stainless steel 1.4401, ~AISI 316	Stainless steel 1.4571, ~AISI 316Ti	> 12"
	2AE.5D0	Ductile iron EN-GJS-400-15, Epoxy coated, min. 80 µm	Alu-bronze ASTM B148 C95400	Stainless steel 1.4401, ~AISI 316	Stainless steel 1.4571, ~AISI 316Ti	
	4C0.4C0	Stainless steel 1.4408, ~CF8M	Stainless steel 1.4408, ~CF8M	Stainless steel 1.4401, ~AISI 316	Stainless steel 1.4571, ~AISI 316Ti	> 12"
5D0.5D0	Alu-bronze ASTM B148 C95400	Alu-bronze ASTM B148 C95400	Alu-bronze ASTM B148 C95400	Inconel® 600 (2.4816)		
⑦ O-Ring	N	Nitrile (NBR)			14°F to 194°F	
	E	EPDM			14°F to 248°F	
	V	Viton® (FPM)			14°F to 392°F	

Other executions see Neptunia N1V or on request!

## Operating instructions

### Appropriate use in accordance to designed capabilities:

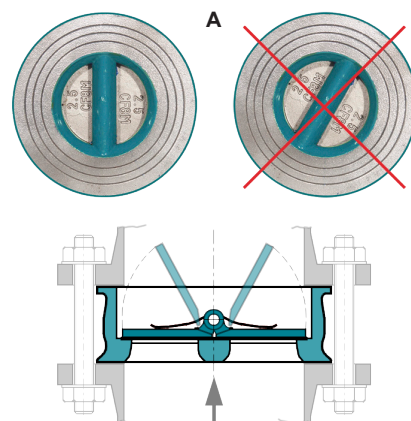
NEPTUNIA N1C swing check valves are designed to block media on one side of the pipe within allowable pressure and temperature limits and to be installed in a pipe system only. **They may be used only with media, which the material and the seals are resistant to.** They are not suitable for media with solid components.

### Storage:

Swing check valves include sealing elements consisting of organic material, that reacts to environmental effects. Therefore, they are to be stored in their original packaging in a place, which is also to be kept as cool, dry and dark as possible. The front and back sides of the swing check valves must not be mechanically damaged.

### Installation:

- Possible damages to the check valve and O-rings are to be checked prior to installation. Check if the plates can be moved. Damaged parts must not be installed.
- Make sure that only those check valves are being installed, that meet the operational requirements regarding pressure category, chemical resistance, connection and dimensions.
- Make sure to install a minimum of 5 x nominal diameter of straight pipeline in front of and behind the swing check valve.
- Do not install the valves directly onto a pump flange.
- Avoid pulsation and pressure impact.
- In a horizontal pipe, the check valve must always be installed with its hinge pin in the vertical position (A).
- Watch flow direction (see arrow on the plate) !
- The check valves are put in their central position according to the outer diameter of the case and the flange screw inner side.
- Tighten the flange screws crosswise.
- After the installation is finished, check the tightness of the connections by a pressure check.



### Special risks:

Before the swing check valve is being removed, pressure has to be completely taken off the plant to avoid media escaping from the pipe. Fluid being left in the pipe must be drained off. Fluid, which has remained in the valve and comes out during removal, is to be collected. If hazardous fluids or gases are left in the valves, the safety measurements required must be taken.

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