

Description

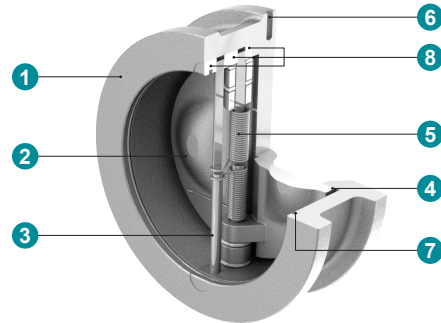
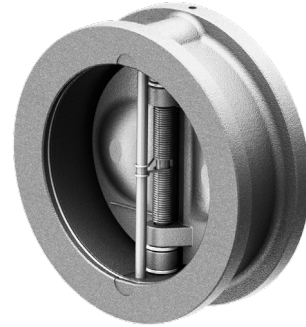
High Performance duo check valve with retainerless design, for mounting directly between flanges according to DIN and ANSI flanges. Maintenance not required. For liquids and gases in marine and industrial applications. Not suitable for media with solid.

Product features

- Body construction Wafer
- Execution Retainerless execution
- Max. working pressure 50 bar (up to 100 bar on request)
- Flange connection PN 10/16/25/40, ANSI cl. 150/300, other ratings on request
- Face to face dimension according to DIN EN 558-1 (PN 10/16/25) and API 594 (ANSI 150/300)
- Temperature range -46°C to +280°C
- Fire safe execution acc. to BS 6755 P.2, API 607, API 6FA and ISO 10497
- Lloyds register Marine type approval for Class III

Construction

1	Body
2	Plate
3	Stem
4	Seals
5	Spring
6	Lifting lug (Sizes ≥ DN 150)
7	Elastic ring
8	Holder

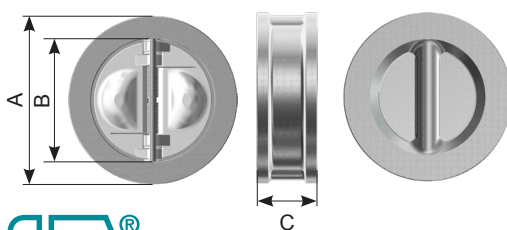


Hydraulic characteristics

DN [mm]	Kv-value [m³/h]	Min. Opening pressure [mbar]
50	56	30
65	68	30
80	172	30
100	453	30
125	477	30
150	1.052	30
200	1.837	30
250	3.826	30
300	4.552	30
350	6.279	30
400	9.591	30
450	12.165	30
500	16.581	30
600	30.814	30



Dimensions



PN 10 / 16				
DN [mm]	A	B	C	Weight [kg]
50	107	57	43	2
65	129	73	46	2,5
80	142	86	64	3,8
100	162	108	64	5
125	192	132	70	6,2
150	218	162	76	8
200	273	213	89	15
250	328	267	114	27
300	378	318	114	34
350	438	363	127	53
400	489	414	140	87
450	539	450	152	100
500	594	518	125	130
600	695	618	178	180

ANSI 150				
DN [mm]	A	B	C	Weight [kg]
50	105	63	60	3
65	124	63	67	4
80	137	95	73	5
100	175	113	73	8
125	197	113	86	13
150	222	160	98	14
200	279	207	127	26
250	340	264	146	44
300	410	315	181	80
350	451	340	184	86
400	514	388	191	112
450	549	438	203	136
500	606	487	219	172
600	718	589	222	238

Type code

N1DR	100	.	3	3	-	410	.	410	.	M
①	②		③	④		⑤		⑥		⑦

①	Type	N1DR	High Performance duo check valve with retainersless design - wafer type	DN 50-600
②	Nominal diameter	50 - 600	mm	
③	Working pressure	3	16 bar	
		4	20 bar	
		5	25 bar	
		6	40 bar	
		7	50 bar	
④	Rating	3	PN 10 and PN 16	
		A	ANSI 150	
		5	PN 25	
		6	PN 40	
		B	ANSI 300	
⑤	Body	4C0	Stainless steel ASTM A351 CF8M	
		4W0	Duplex A890 Gr.4A/F51	
		410	Super Duplex A890 Gr.5A/F53	
⑥	Plate	4C0	Stainless steel ASTM A351 CF8M	
		4W0	Duplex A890 Gr.4A/F51	
		410	Super Duplex A890 Gr.5A/F53	
⑦	Seals	M	Metal seated	-46°C to 280°C
		E	EPDM	-25°C to 125°C
		N	Nitrile (NBR)	-10°C to 100°C
		V	Viton® (FPM)	-15°C to 150°C

Operating instructions

Appropriate use in accordance to designed capabilities:

NEPTUNIA N1DR 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:

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 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 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 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.

