

NR-040 D PN 16 /25 /40



Removable Cover Check Valves for Potable Water Pump Stations

Description

Check valve with a swing-type disc, allows for one-directional flow and prevents liquid return to its source.

This valve has a removable lid which allows for the cleaning and maintenance of the valve without the need to remove it from the pipeline. The valve disc is connected to the valve body with an arm. Sealing is performed by the closing of the disc up against the valve seat, located at the inlet to the body.

The valve is suitable for use in potable water systems and is compliant with the Israeli Standard 5452 (only up to 16")

Applications

- Pumping stations for potable water systems.
- Surge protection along the pipeline (in accordance with the specific design)

Operation

With flow stoppage, the disc drops down and closes the valve inlet. The static backpressure from the downstream water column closes the disc up against the valve seat which seals against backflow.

In the event of a delay in the drop of the disc, the water column may accelerate in the opposite direction and cause an unwanted slam of the disc at the moment of closing.

To prevent this, a counterweight must be installed on the valve shaft to accelerate the closure and insure closure of the disc at the point where the liquid stops.

If necessary, a counterweight can be added to both sides of the valve shaft.

Main Features

- The valve is manufactured in diameters: 3" – 40"
- A working pressure up to 16 bar (tested at 25 bar) with optional valve pressure ratings up to 64 bar.
- Maximum working temperature: 90° C.
- Blue epoxy-coated FBE coating in compliance with the NSF standard for potable water (Israeli Standard 5452).
- Cast body built to withstand effects of water hammer.
- Internal parts are made of durable non-corrosive materials, allowing for long term operation under harsh conditions.
- Removable upper cover allows for maintenance without the need to remove the valve from the pipeline.
- The disc is anchored at two points, preventing fluttering and turbulent flow.
- Minimal energy losses and smooth water flow, achieved by the complete elevation of the disc into the upper cover opening.
- Vulcanized disc – for sealing at low pressure and preventing wear

of the sealing area.

- Rubber stoppers restrain the movement of the disc at the maximum opening height; no contact between coated metal parts prevents damage to the coating.
- Flexible bearings for accurate positioning of the shaft, while retaining free movement.
- Triple shaft sealing with the aid of O-ring seals.
- The valve can be installed horizontally or vertically (upward flow only). Vertical installation must have counterweights installed.
- A limit switch can be installed on the shaft to signal the onset or end of flow.
- The valve can be manufactured according to any standard flange requirement.

Options

- Metal disc sealing for work under extremely hard conditions or where there is rapid wear on the vulcanized disc.
- For working pressures higher than 40 bar, please contact the marketing department.
- Optional hydraulic piston attachment to throttle the disc closure - NR-040 D HC
- Optional external dampening mechanism - NR-040 D ED
- Optional limit switch attachment - NR-040 D LS

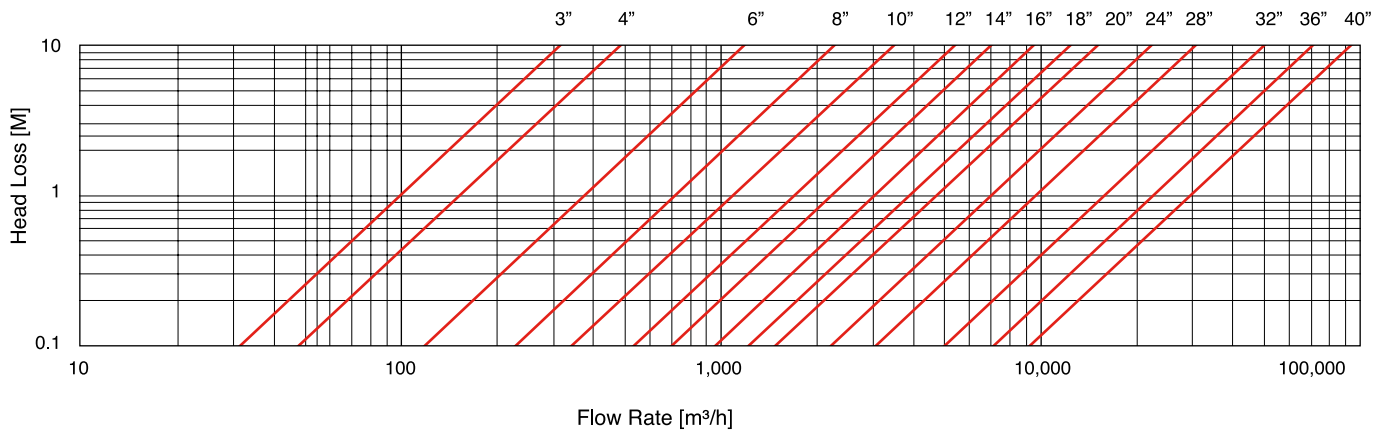
Note:

With flow stoppage, the disc drops down and closes the valve inlet. The static backpressure from the downstream water column closes the disc up against the valve seat which seals against backflow. In the event of a delay in the drop of the disc, the water column may accelerate in the opposite direction and cause an unwanted slam of the disc at the moment of closing.

To prevent this, a counterweight must be installed on the valve shaft to accelerate the closure and insure closure of the disc at the point where the liquid stops.

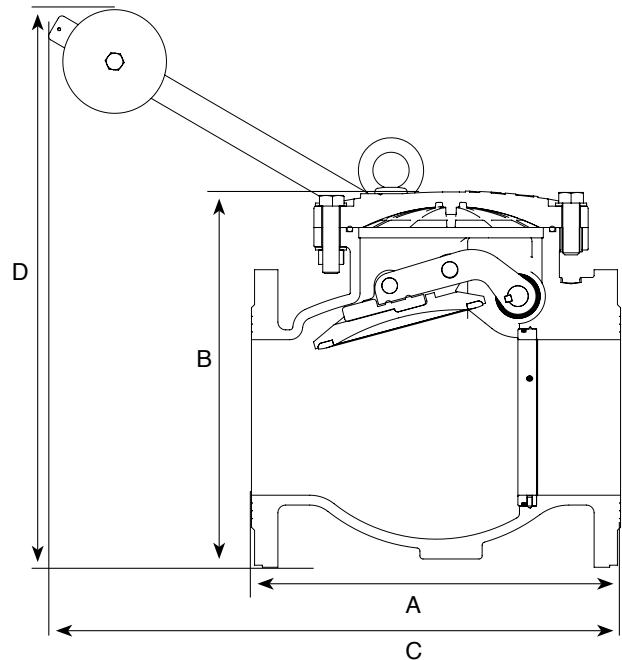
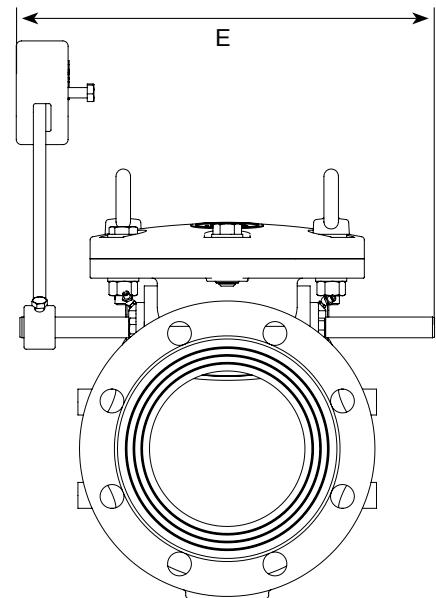
If necessary, a counterweight can be added to both sides of the valve shaft.

HEAD LOSS



DIMENSIONS AND WEIGHTS

Nominal Size	Dimensions mm					Weight Kg.
	A	B	C	D	E	
3" (80 mm)	241	252	330	310	310	19.5
4" (100 mm)	262	284	324	340	328	27
6" (150 mm)	356	360	552	531	410	51
8" (200 mm)	424	450	580	600	508	98
10" (250 mm)	479	537	630	630	555	175
12" (300 mm)	553	622	624	731	605	257
14" (350 mm)	838	700	645	907	705	361
16" (400 mm)	760	734	641	842	705	373
18" (450 mm)	978	880	890	1200	885	770
20" (500 mm)	865	892	700	1110	1000	660
24" (600 mm)	1295	1150	885	1300	1135	1280
28" (700 mm)	1448	1315	1250	1700	1342	1670
32" (800 mm)	1850	1377	1400	1790	1339	2200
36" (900 mm)	1956	1507	1400	1980	1440	2349
40" (1000 mm)	2250	1680	1290	2000	1545	3350



PARTS LIST AND SPECIFICATION

No.	Part	Material
1	Lifting Ring	Steel Zinc Coated
2	Bolt	Steel Zinc Cobalt Coated
3	Washer	Steel Zinc Cobalt Coated
4	Cover	Reinforced Nylon / Ductile Iron
5	Disc	Stainless Steel 316 + Vulcanized Rubber
6	Stopper	EPDM
7	Cotter Pin	Stainless Steel 316
8	Pin	Stainless Steel 316
9	Disc Arm	Stainless Steel 316
10	Disc Arm Key	Stainless Steel 316
11	Shaft	Stainless Steel 316
12	Spacer	Stainless Steel 316
13	O-ring Seal	EPDM
14	Internal Bearing	EPDM
15	Bearing	Acetal
16	Bearing Key	Reinforced Nylon
17	Bolt	Stainless Steel 316
18	O-ring Seal	EPDM
19	Threaded Bushing	Stainless Steel 316
20	Body	Ductile Iron
21	Washer	Steel Zinc Cobalt Coated
22	Nut	Steel Zinc Cobalt Coated
23	O-ring Seal	EPDM
24	Body Seat	Stainless Steel 316
25	Body Seat Bolt	Stainless Steel 316
26	Counterweight	Cast Iron / Steel

Bearing Structure for Big Dimensions

