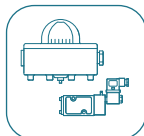
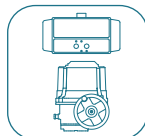
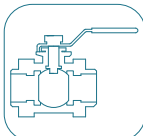
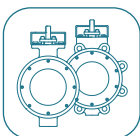
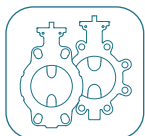


Dual Plate Check Valve



General information

Wafer dual check valve is a self-operating check valve where it is desirable to permit flow in one direction and prevent backflow in the opposite direction. The disc opens in case that the upstream pressure exceeds the downstream pressure and the spring elasticity. When the flow velocity upstream decreases or ceases, the spring will automatically close the dual plates prior to flow reversal. This creates a positive shutoff against flow reversal and eliminates system surges and water hammer.



It is designed to handle a variety of applications:

In downstream of pump preventing flow reverser.

In wellhead injection lines, for oil rigs and platforms.

In gas and oil processing plants and refinery on delivery/discharge side of pumps.

For LNG and chemical storage tank, use on discharge side of pump to prevent backflow.

Design features

- **No plug design on the body** - Shaft is fixed in valve body so there is no any possible leakage and potential accident.

Short face-to-face dimension.

- Lighter weight, by 80-90% than non-conventional full-body check valves.
- Low cracking pressure because of spring-loaded, double disc design.
- Long leaf springs prevent rubbing of plate on seat.

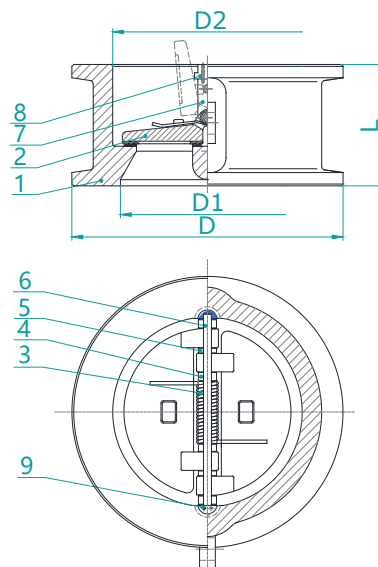
Specifications

Connection:	Wafer
Nominal diameter:	DN50-DN600
Rating:	CLASS150/CLASS300, PN10/PN16/PN25/PN40
Body:	Carbon steel, stainless steel, duplex, super duplex
Disc:	Stainless steel, duplex, super duplex
Seat:	Stainless steel, duplex, super duplex, rubber
Spring:	Stainless steel, Inconel

Technical data

Part list and material specification

No.	Part name	Material
1	Body	WCB, CF8, CF8M
2	Disc	CF8, CF8M, 2205, 2507
3	Spring	SS304, SS316, Inconel X750
4	Spring plate	SS304, SS316
5	Spacer	SS304, SS316
6	Shaft	SS304, SS316, 2205, 2507
7	Seat	13Cr, SS304, SS316, 2205, 2507, NBR, EPDM, FPM, PTFE
8	Locating piece	SS304, SS316
9	Screw	SS304, SS316



Dimensions

DN	INCH	Rating	L	D	D1	D2	Weight [Kg]
50	2	Class150 PN20	60	103	51	61	2.5
65	2 ½		67	122	65	75	3
80	3		73	135	80	92	4
100	4		73	173	102	114	6
125	5		86	195	127	140	8
150	6		98	220	152	166	13
200	8		127	277	203	210	25
250	10		146	337	254	266	39
300	12		181	407	305	310	54
350	14		184	448	350	355	80
400	16		191	512	400	405	117
450	18		203	547	450	455	138
500	20		219	604	500	505	163
600	24		222	715	600	605	331
DN	INCH	Rating	L	D	D1	D2	Weight [Kg]
50	2	Class300 PN40	60	110	51	61	3
65	2 ½		67	128	65	75	4
80	3		73	147	80	92	6
100	4		73	179	102	114	8
125	5		86	214	127	140	15
150	6		98	249	152	166	18
200	8		127	305	203	210	31
250	10		146	359	254	266	51
300	12		181	420	305	310	77
350	14		222	483	350	355	117
400	16		232	537	400	405	190
450	18		264	594	450	455	200
500	20		292	652	500	505	265
600	24		318	772	600	608	410

Technical data

Fluid data

DN	INCH	Fluid resistance coefficient ξ - Valve full open	Kv	Opening pressure [KPa]	
				Vertical flow ↑	Horizontal flow →
50	2	2.6	63	2	1
65	2 ½"	2.4	109	2	1
80	3	2.3	172	2	1
100	4	2.0	289	2	1
125	5	1.8	476	2	1
150	6	1.5	750	2	1
200	8	1.3	1432	2	1
250	10	1.2	2330	2	1
300	12	1.0	3676	2	1
350	14	0.9	5274	2	1
400	16	0.8	7306	3	1
450	18	0.8	9246	3	1
500	20	0.8	11415	3	1
600	24	0.7	17573	3	1

The flow coefficient - Kv can be calculated according to the below formula:

Liquid:

$$K_V = Q \cdot \sqrt{\frac{W}{\Delta P}}$$

Gas:

$$K_V = \frac{V_N}{514} \cdot \sqrt{\frac{G \cdot T}{\Delta P \cdot P_d}}$$

K_V: Flow coefficient

Q: Maximum flow volumn, m³/h

W: Exact weight, kg/m³

ΔP: Pressure loss, bar

V_N: Maximum flow, Nm³/h

G: Exact weight, kg/Nm³

T: Absolute temperature, Kelvin

P_d: Absolute pressure downstream, bar