EV1510 Flanged Wafer Dual Plate Check Valve

For closing or preventing backward flow of heating, cooling, and potable systems

Overview

The WRAS approved flanged Wafer Dual Plate Check Valve closes to prevent backward flow of hot and cold-water systems for a wide variety of applications including potable water, HVAC, oil, and gas production, marine, chemical, wastewater and mining. Note: unsuited to petroleum services, steam services, or services where the working pressure or temperature fall outside of ranges stated.

Features and Benefits

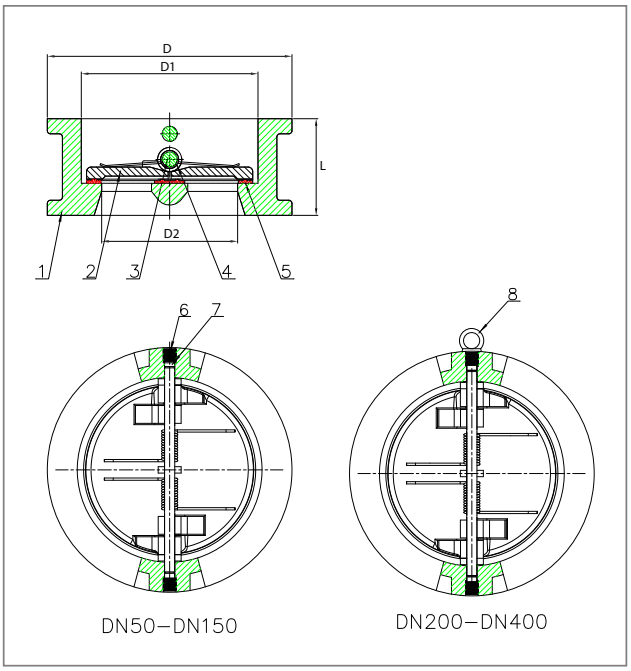
- Fully stocked from DN50-DN300, with other sizes available on request up to and including DN400
- Fusion bonded epoxy coating in accordance with ANSI/AWWA C550
- PN16 flange to BS EN 1092-2:1997
- Design and manufactured to standard BS EN 16767
- Face to face dimension to standard BS EN 588-1
- Working Pressure PN16
- Regulation 4 approved for use on potable water systems

Materials

Description		Material	Grade
1	Body	Ductile iron	EN-GJS-500-7
2	Disc	Ductile iron	EN-GJS-500-7
3	Stem	Stainless steel	SS316
4	Spring	Stainless steel	SS316
5	Seat	Rubber	EPDM
6	Countersink hex head	Carbon steel	Alloy steel
7	Shaft seal	Plated rubber	Plated EPDM
8	Eye bolt (DN200-400 only)	Carbon steel zinc	-

Technical Specification

Specification	
Medium	Heating, cooling, and potable water systems
Maximum working pressure	PN16
Working temperature range	0 – 60°C
Installation	Vertical or horizontal
Connection	Flanged PN16
Paint RAL	RAL5005



Product Codes

Product Code	Size	Weight (kg)	Shell Tested (2.4 MPa)	Seat Tested (1.76 MPa)
EV1510-050	DN50	1.46	15s	15s
EV1510-065	DN65	2.16	60s	
EV1510-080	DN80	2.77		
EV1510-100	DN100	4.07		
EV1510-125	DN125	6.20		
EV1510-150	DN150	8.15		
EV1510-200	DN200	14.72		
EV1510-250	DN250	25.00	180s	30s
EV1510-300	DN300	37.50		
EV1510-350	DN350	61.10		
EV1510-400	DN400	79.70		

Technical Details

Flanged Wafer Dual Plate Check Valve

Dimensions

Size		L	D	D1	D2
DN	Inch	(mm)	(mm)	(mm)	(mm)
DN50	2”	54	107	64	46
DN65	2 ½”	54	127	78	60
DN80	3”	57	142	94	70
DN100	4”	64	162	117	84
DN125	5”	70	192	145	115
DN150	6”	76	218	170	134
DN200	8”	95	273	224	184
DN250	10”	108	328	265	220
DN300	12”	143	378	310	260
DN350	14”	184	438	360	302
DN400	16”	191	489	410	350

Pressure Drops

Size	Wafer Check Valve Properties				
	Measured valve opening	Flowmeter (m^3/h)	Water velocity (m/s)	Differential pressure (kPa)	Flow Coefficient Kv (m^3/h)
DN50	100%	7.04	1.00	25.61	13.56
		14.14	2.00	40.53	22.15
		21.21	3.00	57.31	28.04
		28.26	4.00	65.95	34.70
		31.79	4.50	73.18	37.13
		32.48	4.60	70.88	38.48
		35.30	5.00	78.50	40.06
		43.09	6.10	93.65	44.63
		35.04	4.96	73.66	40.96
		47.51	6.73	104.12	46.63
DN65	100%	11.90	1.00	24.33	24.04
		23.90	2.00	33.43	40.93
		35.78	3.00	40.93	55.69
		47.71	4.00	47.57	69.07
		53.67	4.50	52.67	74.07
		54.90	4.60	53.56	74.89
		59.68	5.00	58.05	78.49
		72.82	6.10	73.62	84.57
		49.85	4.17	48.24	71.93
		67.51	5.65	66.75	82.72

Pressure Drops

Flanged Wafer Dual Plate Check Valve

Size	Wafer Check Valve Properties				
	Measured valve opening	Flowmeter (m^3/h)	Water velocity (m/s)	Differential pressure (kPa)	Flow Coefficient Kv (m^3/h)
DN80	100%	18.08	1.00	16.81	45.13
		36.15	2.00	21.27	78.03
		54.18	3.00	29.88	98.89
		72.29	4.00	41.66	111.79
		81.34	4.50	47.25	118.46
		83.16	4.60	48.61	119.27
		90.37	5.00	53.74	123.27
		110.41	6.10	74.39	128.63
		77.13	4.26	43.85	115.89
		102.90	5.69	59.83	132.99
DN100	100%	28.32	1.00	9.33	93.02
		56.44	2.00	13.88	151.30
		84.78	3.00	20.75	185.99
		112.91	4.00	27.92	213.31
		127.22	4.50	31.39	226.09
		129.97	4.60	32.36	228.67
		141.22	5.00	35.39	237.42
		172.36	6.10	44.50	258.11
		133.09	4.71	32.60	233.42
		177.42	6.28	47.07	258.95
DN125	100%	44.36	1.00	6.57	174.18
		92.22	2.09	9.02	302.21
		92.74	2.10	9.00	302.21
		132.57	3.00	10.96	399.95
		132.73	3.01	10.95	399.95
		132.88	3.01	10.94	399.95
		179.04	4.05	16.84	435.39
		179.08	4.06	16.85	435.39
		179.35	4.06	16.75	436.21
		194.16	4.40	18.78	448.40
		194.08	4.40	18.74	448.53
		204.14	4.62	20.31	453.75
		204.42	4.63	20.30	453.75
		204.58	4.63	20.28	453.75
		204.38	4.63	20.15	455.20

Pressure Drops

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	Measured valve opening	Flowmeter (m^3/h)	Water velocity (m/s)	Differential pressure (kPa)	Flow Coefficient Kv (m^3/h)
DN125	100%	200.44	4.54	19.63	454.98
		208.08	4.71	20.72	456.58
		208.36	4.72	20.71	457.64
		208.28	4.72	20.71	457.64
		222.24	5.03	22.52	466.80
		222.44	5.04	22.50	466.80
		242.97	5.50	25.35	482.64
		243.17	5.51	25.32	482.64
		243.49	5.51	25.32	482.64
		260.84	5.91	28.93	487.03
		261.19	5.92	28.92	487.03
		264.97	6	29.57	490.33
		264.81	6	29.57	490.33
		269.19	6.1	30.14	490.35
		269.15	6.1	30.02	491.16
		269.47	6.1	29.67	494.52
		269.95	6.11	29.69	495.46
		269.55	6.1	29.91	494.15
		269.83	6.11	29.79	492.62
		278.18	6.3	31.54	497.26
		278.02	6.3	31.6	495.06
		277.98	6.3	31.6	495.06
		295.49	6.69	34.57	501.83
		295.69	6.7	34.53	501.83
		295.53	6.69	34.38	502.69
		296.05	6.7	34.38	502.69
DN150	100%	75.31	1.18	9.27	244.70
		75.47	1.19	9.29	246.79
		129.90	2.04	12.03	374.10
		191.05	3.00	14.55	500.03
		191.01	3.00	14.55	500.03
		254.55	4.00	21.62	548.39
		254.23	4.00	21.65	546.85
		272.41	4.28	24.15	558.15
		272.25	4.28	24.16	558.15
		280.09	4.41	25.25	555.88
		279.58	4.40	25.28	557.16
		287.06	4.51	26.13	562.22
		286.74	4.51	26.39	561.22
		286.46	4.51	26.39	561.22
		293.06	4.61	27.28	562.09
		293.30	4.61	27.28	562.09
		293.94	4.62	27.43	560.77
		300.42	4.72	28.32	567.13
		300.66	4.73	28.33	567.13

Pressure Drops

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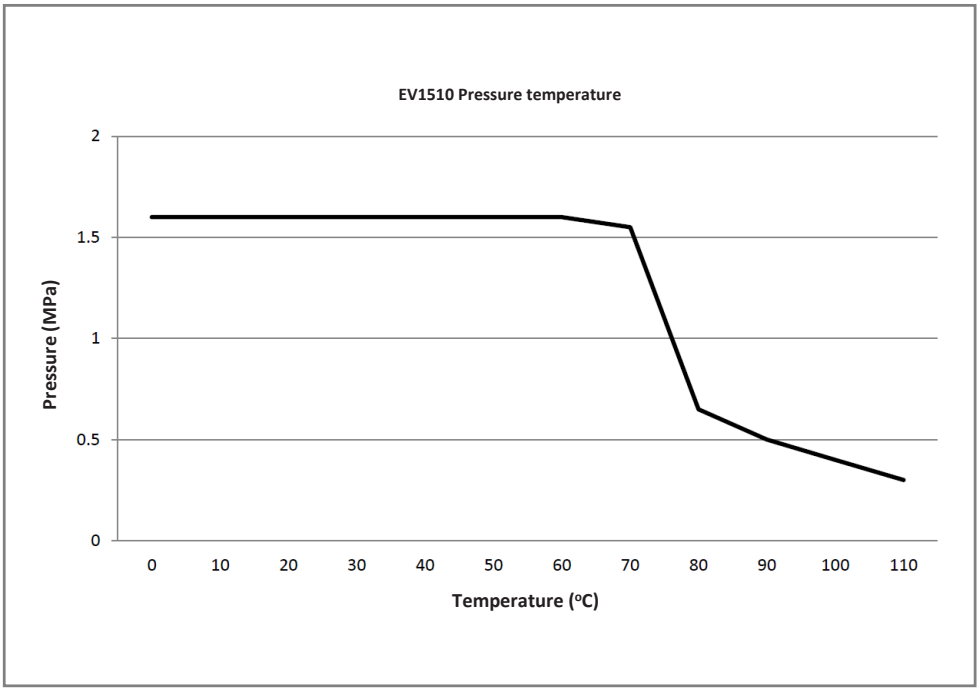
Size	Wafer Check Valve Properties				
	Measured valve opening	Flowmeter (m^3/h)	Water velocity (m/s)	Differential pressure (kPa)	Flow Coefficient Kv (m^3/h)
DN150	100%	348.8	5.49	34.56	597.47
		370.21	5.82	36.6	610.79
		375.18	5.9	37.39	612.77
		387.79	6.1	39.41	617.83
		388.03	6.1	39.4	617.83
		388.11	6.1	39.62	617.83
		394.52	6.2	40.18	622.43
		401.96	6.32	41.32	624.01
		400.37	6.3	41.36	622.47
		400.52	6.3	41.36	622.47
DN200	100%	113.27	1.00	7.85	411.46
		226.38	2.00	9.12	742.71
		339.25	3.00	9.35	1108.84
		452.64	4.00	12.27	1277.46
		508.46	4.50	13.99	1356.29
		519.44	4.60	15.37	1319.15
		565.04	5.00	16.08	1402.01
		689.49	6.10	20.77	1511.99
		521.95	4.62	14.00	1392.69
		707.63	6.26	22.44	1491.06
DN250	100%	176.32	1.00	7.28	667.50
		354.09	2.00	8.69	1212.54
		529.97	3.00	9.92	1694.78
		706.65	4.00	12.67	1970.17
		794.45	4.50	14.23	2102.47
		812.08	4.60	14.65	2126.69
		883.52	5.00	16.06	2201.06
		1076.84	6.10	21.07	2349.20
		823.48	4.66	14.47	2170.04
		1098.27	6.22	21.79	2361.90
DN300	100%	253.63	1.00	6.81	982.24
		763.62	3.00	9.36	2509.73
		507.45	2.00	8.47	1755.40
		1016.35	4.00	13.39	2789.34
		1145.74	4.50	15.11	2942.66
		1169.70	4.60	15.30	2961.27
		1272.15	5.00	17.04	3110.39
		1550.75	6.10	22.06	3334.86
		1169.52	4.60	14.79	3040.87
		1585.47	6.23	22.12	3349.39

Pressure Drops

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