
SERIES 3W/3L

RESILIENT SEATED BUTTERFLY VALVES



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THE HIGH PERFORMANCE COMPANY

FEATURES AND BENEFITS

The Series 3W/3L resilient seated butterfly valves offer:

MOLDED-IN SEAT

- > Tightly controlled vulcanization process produces accurate and repeatable dimensions, which leads to consistently lower torques over the valve's lifetime.

PRECISION PROFILED DISC SEALING EDGE

- > Extends the valve life by reducing seat wear.

ROBUST FLANGE SEALING

- > Tear-dropped shaped seat face enables tight sealing with a wide variety of industrial flanges.

END OF LINE CAPABILITY

- > Lug style valve allows for sealing at full rated pressure even when the downstream flange is removed..

ISO 5211 TOP FLANGE

- > Direct mounting capability between the valve and Bray actuation reduces package height and complexity.

UPPER AND LOWER STEM BEARINGS

- > Reduce operating torque and increase reliability in high cycle applications.



TECHNICAL DATA

Size Range	DN 50 to 600 2" to 24"
Body Style	3W One-piece wafer 3L One-piece lug
Temperature Range	-29°C to 121°C -20°F to 250°F
Maximum Operating Pressure	17.2 bar 250 psi
Shutoff Rating	Bubble tight

MATERIAL OPTIONS

COMPONENT	MATERIAL
Body	Ductile Iron ASTM A536
Disc	Nylon 11 Coated Ductile Iron 316 Stainless Steel
Stem	431 Stainless Steel
Seat	EPDM Buna-N

DESIGN STANDARDS

Valve Design	API 609 Category A MSS SP-67
Actuator Mounting	ISO 5211 AS 2129 Tables D & E
Flange Accommodation	ASME B16 Class 125/150 EN 1092-1 PN10/16 JIS 10K API 598
Seat Testing	ISO 5208 MSS SP-61
Face-to-Face	API 609 EN558 Series 20

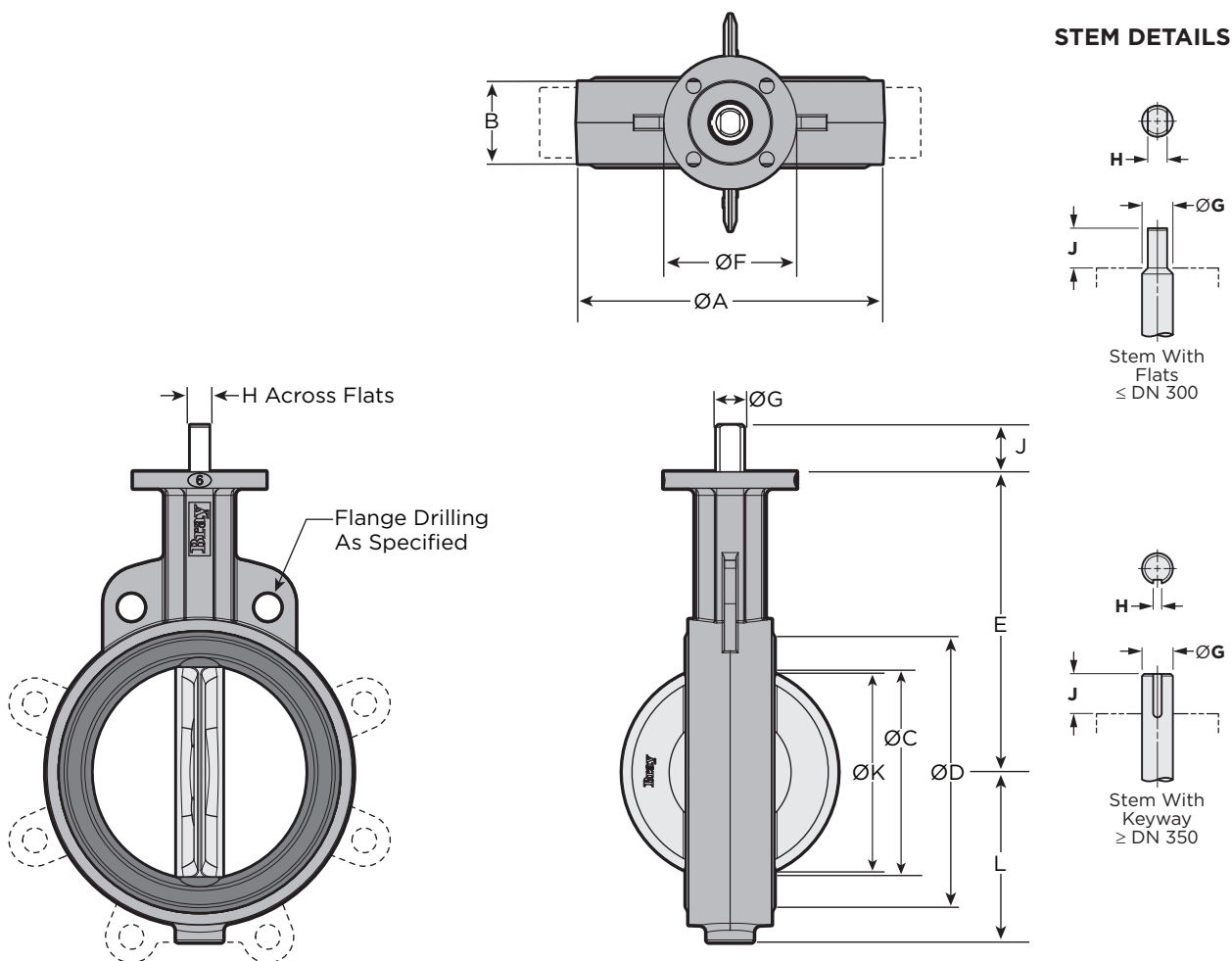
CERTIFICATIONS AND APPROVALS

Certifications	CE/PED ANSI/NSF 61 ANSI/NSF 372 FDA Food Contact Approved
Approvals	ABS Type LRQA Type Bureau Veritas

Additional information is available in the 3W/3L Technical Manual.

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DIMENSIONS (mm)

DN	A	B	C	D	E	F	Top Plate Drilling			G	H	J	K*	L		Adp. Code	Weight (Kg)	
							Bolt Circle	Hole Qty	Hole Dia.					Wafer	Lug		Wafer	Lug
50	94	43	51	71	140	90	70	4	10	14	10	32	32	56	58	A	2.5	3
65	106	46	64	84	152	90	70	4	10	14	10	32	48	63	65	A	3	4
80	124	46	76	100	159	90	70	4	10	14	10	32	64	71	71	A	3.5	4
100	154	52	103	129	178	90	70	4	10	16	11	32	91	87	104	B	5.4	6
125	179	56	128	157	191	90	70	4	10	19	13	32	117	102	117	C	6.6	9
150	206	56	146	180	203	90	70	4	10	19	13	32	137	115	129	C	8.7	11
200	267	60	197	237	241	150	125	4	15	22	16	32	190	146	154	D	15.3	18
250	324	68	249	291	273	150	125	4	15	30	22	51	242	181	195	E	23	26
300	378	78	299	342	311	150	125	4	15	30	22	51	291	206	229	E	31	41
350	433	78	337	388	346	150	125	4	14	35	10x10	51	331	238	252	F	48	55
400	488	102	387	442	375	150	125	4	14	35	10x10	51	377	273	287	F	68	75
450	536	114	438	495	406	210	165	4	21	50	12x10	64	427	305	309	G	96	106
500	591	127	489	548	438	210	165	4	21	50	12x10	64	476	356	356	G	129	154
600	710	154	591	650	495	210	165	4	21	64	16x16	102	575	446	446	H	186	222

*Note: K dimension is the disc chordal diameter at the valve face.

Cv VALUES

DN	Disc Position (Degrees)								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	1	4	15	29	46	66	73	86	87
65	1	8	26	44	66	98	141	177	185
80	2	22	43	71	112	171	256	338	360
100	8	37	78	118	192	310	505	689	740
125	9	53	98	170	288	470	759	1131	1218
150	13	86	175	297	479	757	1190	1715	1900
200	19	121	254	429	754	1247	2096	3376	3765
250	37	178	365	728	1215	2005	3342	5814	6661
300	69	240	492	1008	1696	2868	4961	8455	10066
350	110	287	609	1141	1975	3328	5571	9269	11598
400	147	421	844	1547	2651	4440	7412	12214	15395
450	190	470	968	1807	3238	5509	9382	18231	20120
500	230	675	1341	2455	4210	7056	11803	19637	25329
600	317	952	1957	3592	6128	10267	17226	29061	39396

TORQUE VALUES (lb-in) - GENERAL SERVICE

DN	Valve Differential Pressure (psig)					Max. Allowable Stem Torque 431 SS
	High Pressure Disc					
	50	100	150	200	250	
50	124	134	142	150	159	905
65	142	159	186	212	239	905
80	186	221	257	292	327	905
100	239	292	354	434	513	1475
125	354	460	566	664	761	2236
150	531	664	797	929	1062	2236
200	1044	1266	1478	1690	1903	3806
250	1708	2089	2469	2867	3283	11272
300	2283	2912	3540	4160	4779	11272
350	3947	4735	5558	6381	7202	16164
400	5514	6602	7717	8815	9921	23137
450	7425	8797	10222	11664	13112	44156
500	9673	11549	13443	15372	17319	44156
600	16594	20355	24116	27966	31860	142529

Note: For more information on Series 3W/3L torque, please consult the Series 3W/3L Technical Manual.

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Kv VALUES

DN	Disc Position (Degrees)								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	1	3	13	25	40	57	63	74	75
65	1	7	22	38	57	85	122	153	160
80	2	19	37	61	97	148	221	292	311
100	7	32	67	102	166	268	437	596	640
125	8	46	85	147	249	407	657	978	1054
150	11	74	151	257	414	655	1029	1483	1644
200	16	105	220	371	652	1079	1813	2920	3257
250	32	154	316	630	1051	1734	2891	5029	5762
300	60	208	426	872	1467	2481	4291	7314	8707
350	95	248	527	987	1708	2879	4819	8018	10032
400	127	364	730	1338	2293	3841	6411	10565	13317
450	164	407	837	1563	2800	4766	8115	15770	17404
500	199	584	1160	2124	3642	6103	10210	16986	21910
600	274	823	1693	3107	5301	8881	14900	25138	34078

TORQUE VALUES (Nm) - GENERAL SERVICE

DN	Valve Differential Pressure (bar)					Max. Allowable Stem Torque 431 SS
	High Pressure Disc					
	3.4	7	10.3	14	17.2	
50	14	15	16	17	18	102
65	16	18	21	24	27	102
80	21	25	29	33	37	102
100	27	33	40	49	58	167
125	40	52	64	75	86	253
150	60	75	90	105	120	253
200	118	143	167	191	215	430
250	193	236	279	324	371	1274
300	258	329	400	470	540	1274
350	446	535	628	721	814	1826
400	623	746	872	996	1121	2614
450	839	994	1155	1318	1482	4989
500	1093	1305	1519	1737	1957	4989
600	1875	2300	2725	3160	3600	16104

Note: For more information on Series 3W/3L torque, please consult the Series 3W/3L Technical Manual.

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