

## NY/AB Series – Submittal/Technical Data

Resilient Seated Butterfly Valves 2-Way – 2" - 30" and 3-Way – 2" - 20"

### NY/AB Series Butterfly Valves - Valve Body Specifications

Technical Specifications		
Service	Hot Water, Chilled Water, Condenser Water up to 50% Glycol	
Size Range	2-Way	2" through 30" (DN 50 to 750)
	3-Way	2" through 20" (DN 50 to 500)
Body Style	One Piece Lug, 2-Way and 3-Way, for ANSI 125 and ANSI 150 flanges	
Flow Characteristics	Modified Equal Percentage - See Page NY/AB-3 in the Technical Brochure	
Flow Coefficients	See Piping Gemotery Charts on Page NY/AB-9 in the Technical Brochure	
Fluid Temperature Limits	-20 to 250°F (-28 to 121°C)	
Maximum Fluid Velocity	30 ft/second (9 m/second)	
Leakage	Bubble tight at rated maximum differential pressure	
Body Cold Working Pressure Ratings	250 PSI (17.2 Bar)	
Close-Off - Pressure Ratings	2" to 12"	Valve part numbers ending in "0" – 175 PSI
	14" to 30"	Valve part numbers ending in "0" – 150 PSI
	2" to 20"	Valve part numbers ending in "1" – 50 PSI
	24" to 30"	Valve part numbers ending in "1" – 75 PSI
	See pages NY/AB-12 to NY/AB-22 in the Technical Brochure	
Materials  (other materials available upon request)	Body	Cast Iron - 2" Extended Neck; Polyester Powder Coated
	Disc	NY Series - Ductile Iron, Nylon 11 Coated AB Series - Aluminum Bronze SS Series - 316 Stainless Steel
	Seat	EPDM (Ethylene Propylene Diene Monomer) - Peroxide Cured - Replaceable
	Stem	416 Stainless Steel
	Tee	Ductile Iron (3-way valves only)
Weights	See Dimensions	
Design Standard	MSS SP-67, API 609, Category A	
Testing Standard	MSS SP-61, API 598, EN 12266-1	
Face to Face	MSS SP-67, API 609, Category A, EN 558	
Approvals & Certifications	ABS, ATEX, Bureau Veritas, CRN, DNV, FDA 21 CFR 177.1550, NSF 61/372, PED, PE(S)R	

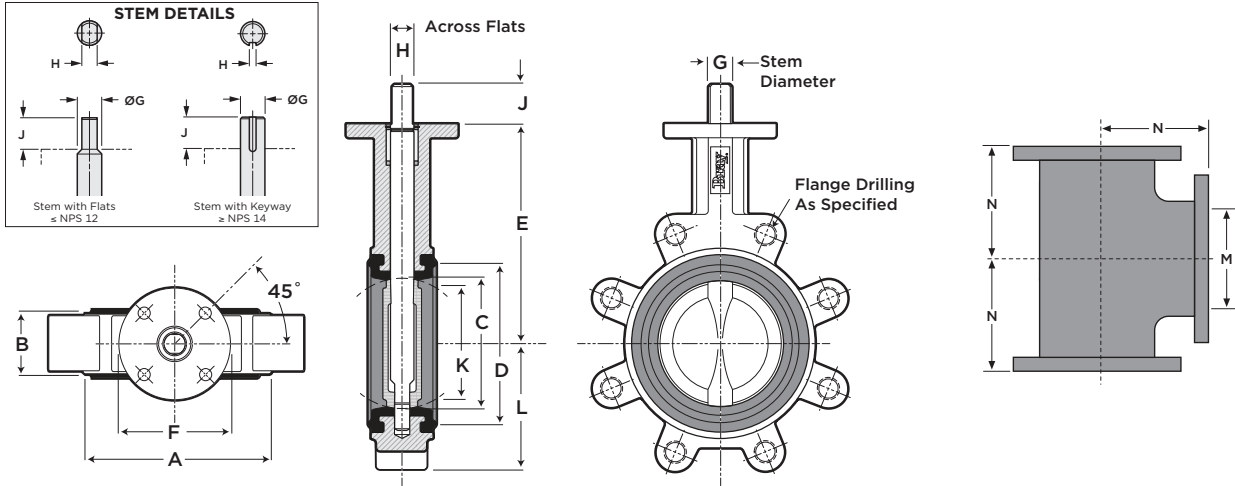
**Disclaimer** - The performance specifications are nominal and conform to acceptable industry standards.  
For application at conditions beyond these specifications, consult the local Bray office.  
Bray, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

### NY/AB Series Butterfly Valves - Cv's at Various Angles of Openings

Valve Size	Low and Standard Pressure Cv Disc Values								
	ANGLE OF DISC OPENING								
	10°	20°	30°	40°	50°	60°*	70°	80°	90°
2"	1	7	16	27	43	61	84	114	144
2.5"	1.5	11	24	43	67	107	163	223	282
3"	2	15	35	61	96	154	267	364	461
4"	3	27	62	109	171	274	496	701	841
5"	5	43	98	170	268	428	775	1146	1376
6"	6	56	129	225	354	567	1025	1543	1850
8"	12	102	241	421	680	1081	1862	2842	3316
10"	19	162	382	667	1076	1710	2948	4525	5430
12"	27	235	555	1005	1594	2563	4393	6731	8077
14"	34	299	756	1320	2149	3384	5939	9974	10538
16"	45	397	1001	1749	2847	4483	7867	11761	13966
18"	58	507	1281	2237	3643	5736	10062	14496	17214
20"	72	632	1595	2786	4536	7144	12535	18812	22339
24"	259	1028	2387	4244	6962	11040	18235	27186	33154
30"	420	1652	3986	7080	11328	18090	28844	43003	52443

\* When selecting a butterfly valve for a modulating application, use a valve where the calculated Cv falls between 0 - 60°

## NY/AB Series Butterfly Valves - Valve Dimensions



### VALVE BODY DIMENSIONS — in. (mm)

Size		A	B	C	D	E	F	G	H	J	K*	L	
in.	mm											Wafer	Lug
2	50	3.7 (94)	1.6 (41)	2.0 (51)	2.9 (74)	5.5 (140)	3.5 (90)	0.6 (14)	0.39 (10)	1.25 (32)	1.3 (32)	2.2 (56)	2.3 (58)
2.5	65	4.2 (107)	1.8 (46)	2.5 (64)	3.4 (86)	6.0 (152)	3.5 (90)	0.6 (14)	0.39 (10)	1.25 (32)	1.9 (48)	2.5 (63)	2.6 (65)
3	80	4.9 (124)	1.8 (46)	3.0 (76)	4.2 (107)	6.3 (159)	3.5 (90)	0.6 (14)	0.39 (10)	1.25 (32)	2.6 (66)	2.8 (71)	2.8 (71)
4	100	6.1 (154)	2.0 (51)	4.0 (102)	5.2 (132)	7.0 (178)	3.5 (90)	0.6 (16)	0.43 (11)	1.25 (32)	3.6 (91)	3.4 (87)	4.1 (104)
5	125	7.1 (179)	2.1 (52)	5.0 (128)	6.2 (157)	7.5 (191)	3.5 (90)	0.8 (19)	0.51 (13)	1.25 (32)	4.6 (117)	4.0 (102)	4.6 (117)
6	150	8.1 (206)	2.1 (52)	5.8 (146)	7.0 (178)	8.0 (203)	3.5 (90)	0.8 (19)	0.51 (13)	1.25 (32)	5.5 (140)	4.5 (115)	5.1 (129)
8	200	10.5 (267)	2.5 (64)	7.8 (197)	9.5 (241)	9.5 (241)	5.9 (150)	0.9 (22)	0.63 (16)	1.25 (32)	7.5 (190)	5.8 (146)	6.1 (154)
10	250	12.8 (325)	2.5 (64)	9.8 (249)	11.5 (292)	10.7 (272)	5.9 (150)	1.2 (30)	0.87 (22)	2.0 (51)	9.5 (242)	7.1 (181)	7.7 (195)
12	300	14.9 (378)	3.0 (76)	11.8 (299)	13.5 (342)	12.3 (311)	5.9 (150)	1.2 (30)	0.87 (22)	2.0 (51)	11.5 (291)	8.1 (206)	9.0 (229)
14	350	16.9 (429)	3.0 (76)	13.3 (337)	15.3 (388)	13.6 (346)	5.9 (150)	1.4 (35)	.39x.39 (10x10)	2.0 (51)	13.0 (331)	9.4 (238)	9.9 (252)
16	400	19.1 (485)	4.0 (102)	15.3 (387)	17.1 (434)	14.8 (375)	8.3 (210)	1.4 (35)	.39x.39 (10x10)	2.0 (51)	14.9 (377)	10.8 (273)	11.3 (287)
18	450	21.1 (536)	4.3 (109)	17.3 (438)	19.5 (495)	16.0 (406)	8.3 (210)	2.0 (50)	.47x.39 (12x10)	2.5 (64)	16.9 (429)	12.0 (305)	12.2 (309)
20	500	23.3 (592)	5.0 (127)	19.3 (489)	21.6 (548)	17.3 (438)	8.3 (210)	2.0 (50)	.47x.39 (12x10)	2.5 (64)	18.8 (476)	14.0 (356)	14.0 (356)
24	600	28.2 (716)	6.1 (154)	23.3 (591)	25.6 (650)	19.5 (495)	8.3 (210)	2.5 (64)	.62x.62 (16x16)	4.0 (102)	22.7 (575)	17.6 (446)	17.6 (446)
30	750	23.3 (592)	5.0 (127)	19.3 (489)	21.6 (548)	17.3 (438)	8.3 (210)	2.0 (50)	.47x.39 (12x10)	2.5 (64)	18.8 (476)	14.0 (356)	14.0 (356)

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

### VALVE BODY DIMENSIONS — in. (mm) - Continued

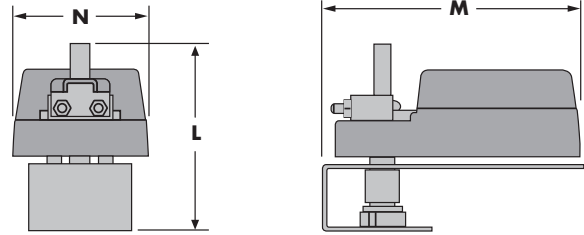
Size		Top Plate Drilling			Lug Bolt Data			Tee		Adp. Code	Weight lbs. (kg)		
in.	mm	Bolt Circle	Hole Qty	Hole Dia.	BC	Holes	Threads	M	N		Wafer	Lug	Tee**
2	50	2.8 (70)	4	0.4 (10)	4.8 (122)	4	5/8-11	2.0 (51)	4.5 (114)	A	6 (2.5)	7 (3)	19 (8.6)
2.5	65	2.8 (70)	4	0.4 (10)	5.5 (140)	4	5/8-11	2.5 (64)	5.0 (127)	A	7 (3)	8 (4)	27 (12.3)
3	80	2.8 (70)	4	0.4 (10)	6.0 (152)	4	5/8-11	3.0 (76)	5.5 (140)	A	8 (3.5)	9 (4)	39 (17.7)
4	100	2.8 (70)	4	0.4 (10)	7.5 (191)	8	5/8-11	4.0 (102)	6.5 (165)	B	12 (5.4)	15 (7)	62 (28.1)
5	125	2.8 (70)	4	0.4 (10)	8.5 (216)	8	3/4-10	5.0 (127)	7.5 (191)	C	14 (6.4)	20 (9)	79 (35.78)
6	150	2.8 (70)	4	0.4 (10)	9.5 (241)	8	3/4-10	6.0 (152)	8.0 (203)	C	17 (8.7)	23 (10)	96 (43.5)
8	200	4.9 (125)	4	0.6 (15)	11.8 (300)	8	3/4-10	8.0 (203)	9.0 (229)	D	34 (15)	42 (19)	155 (70.3)
10	250	4.9 (125)	4	0.6 (15)	14.3 (363)	12	7/8-9	10.0 (254)	11.0 (279)	E	49 (22)	66 (30)	270 (122.5)
12	300	4.9 (125)	4	0.6 (15)	17.0 (432)	12	7/8-9	12.0 (305)	12.0 (305)	E	67 (30)	88 (40)	380 (172.4)
14	350	4.9 (125)	4	0.6 (15)	18.8 (478)	12	1-8	14.0 (356)	14.0 (356)	F	95 (43)	114 (52)	435 (197.3)
16	400	4.9 (125)	4	0.6 (15)	21.3 (541)	16	1-8	16.0 (406)	15.0 (381)	F	135 (61)	166 (75)	550 (249.5)
18	450	6.5 (165)	4	0.8 (21)	22.8 (579)	16	1-1/8-7	18.0 (457)	16.5 (419)	G	200 (91)	226 (103)	665 (301.6)
20	500	6.5 (165)	4	0.8 (21)	25.0 (635)	20	1-1/8-7	20.0 (508)	18.0 (457)	G	260 (118)	305 (138)	855 (387.8)
24	600	6.5 (165)	4	0.8 (21)	29.5 (749)	20	1-1/4-8	-	-	H	420 (191)	500 (226)	-
30	750	6.5 (165)	4	0.8 (21)	25.0 (635)	20	1-1/8-8	-	-	G	660 (299)	855 (387)	-

\*\*Tee weight is the weight of the Tee alone. For 3-Way assemblies add the weight of two lug valves.

## NY/AB Series Butterfly Valves - Actuator Dimensions

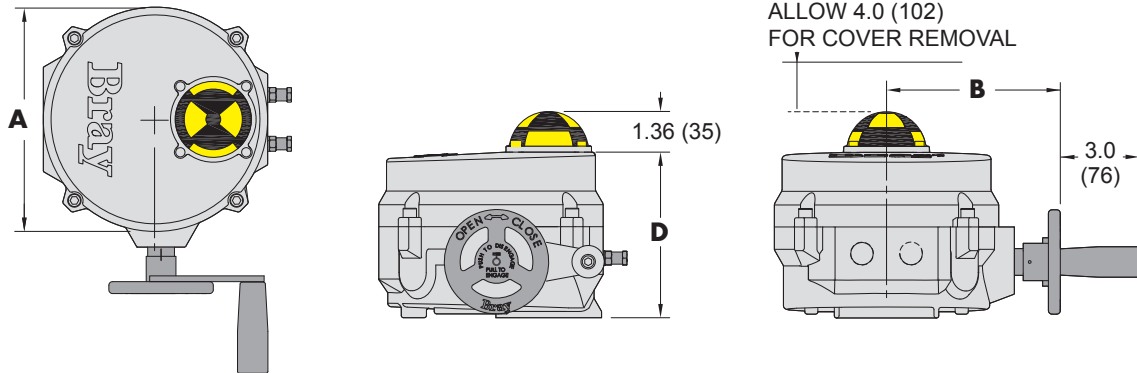
### COMMERCIAL ACTUATOR DIMENSIONS — in. (mm)

Actuator Model Number	L	M	N	Weight lbs. (kg)
DCS-140 Series	7.4 (188)	11.0 (279)	4.0 (102)	4.9 (2.2)
DC-310 Series	7.4 (188)	11.0 (279)	4.0 (102)	4.4 (2.0)
D-140/210 Series	6.7 (170)	7.5 (191)	4.0 (102)	2.9 (1.3)
DS-180 Series	7.4 (188)	11.0 (279)	4.0 (102)	6.4 (2.9)
Tandem Actuators	11.8 (300)	18.0 (457)	4.0 (102)	12.8 (5.8)



### INDUSTRIAL ACTUATOR DIMENSIONS — in. (mm)

Actuator Model Number	A	B	D*		Weight lbs. (kg)
			2-Way	3-Way	
70-0081	7.5 (191)	5.8 (147)	5.6 (141)	8.6 (218)	13 (6)
70-0121/0201/E301	10.1 (256)	7.8 (198)	6.6 (168)	10.7 (273)	28 (13)
70-0501/0651	12.1 (308)	9.5 (241)	7.2 (183)	13.2 (335)	48 (22)
70-1300/1800	12.1 (308)	9.5 (241)	12.5 (316)	20.5 (521)	118 (54)
AU-4068	32.1 (815)	28.9 (734)	12.3 (312)	22.3 (566)	195 (88)
AU-7080	32.1 (815)	31.9 (810)	12.3 (312)	-	285 (129)



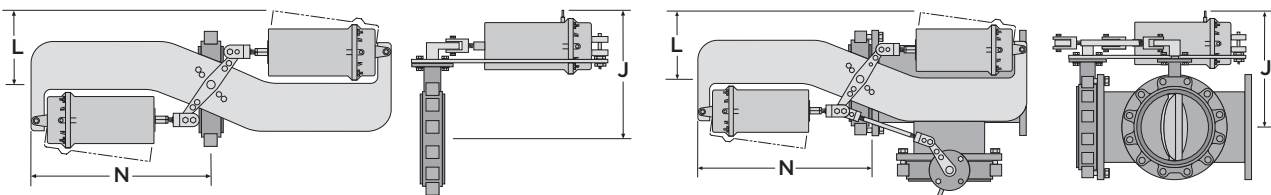
### LP PNEUMATIC ACTUATOR DIMENSIONS — in. (mm)

Low Pressure Pneumatic Actuator Model Number	J	L	N		Weight lbs. (kg)
			2-Way	3-Way	
D-3153	13.8 (351)	5.7 (145)	16.0 (406)	10.9 (277)	8.0 (3.6)
D-3244	14.4 (366)	7.3 (185)	20.0 (508)	12.0 (305)	13.6 (6.2)
D-3246	16.4 (417)	8.9 (226)	25.8 (655)	13.7 (348)	17.6 (8.0)
D-3246-D	17.6 (447)	8.9 (226)	22.8 (579)	24.00 (610)	35.1 (15.9)

Largest valve/actuator combination shown

L = Maximum swing of the actuator

N = Maximum swing of the arm

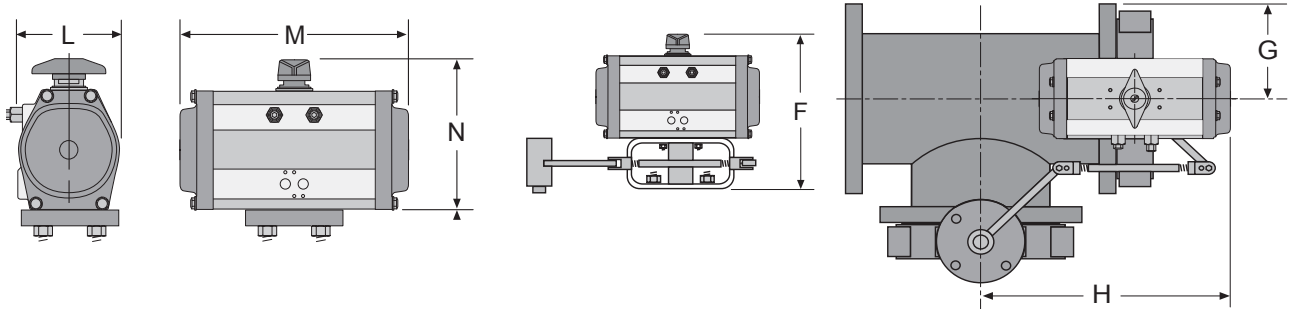


## NY/AB Series Butterfly Valves - Actuator Dimensions

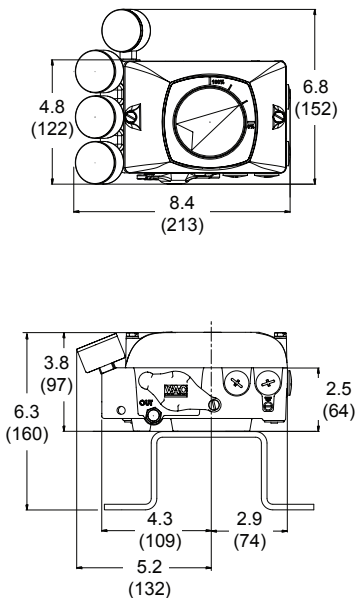
### PNEUMATIC ACTUATOR DIMENSIONS — in. (mm)

Actuator Model Number	L	M	N	F	G	H	Weight lbs. (kg)	
							Double Acting	Spring Return
92/93-063	3.1 (79)	5.6 (142)	4.5 (114)	7.5 (191)	3.0 (76)	9.1 (231)	3.4 (1.5)	4.1 (1.9)
92/93-083	4.1 (104)	7.4 (188)	5.4 (137)	8.4 (213)	4.5 (114)	13.3 (338)	6.3 (3)	8.1 (4)
92/93-093	4.4 (112)	9.1 (231)	5.8 (147)	8.8 (224)	5.5 (140)	14.9 (378)	8.5 (4)	10.8 (5)
92/93-119	5.2 (132)	12.4 (325)	7.3 (185)	11.4 (290)	8.0 (203)	19.9 (505)	16.9 (8)	22.3 (10)
92/93-128	5.6 (142)	12.8 (734)	8.1 (2.6)	12.2 (310)	8.0 (203)	19.9 (505)	21.0 (10)	27.6 (13)
92/93-160	7.2 (183)	15.5 (394)	9.4 (239)	13.5 (343)	10.5 (267)	26.6 (676)	38.8 (18)	53.2 (24)
92/93-210	9.0 (229)	19.6 (498)	11.6 (295)	17.6 (447)	13.8 (351)	33.1 (841)	77.8 (35)	109.6 (50)
92/93-255	10.8 (274)	28.8 (732)	13.5 (343)	19.5 (495)	13.8 (351)	33.1 (841)	167.0 (76)	210.8 (96)
98-45E2-...	14.8 (376)	52.8 (1341)	9.7 (246)	-	-	-	183 (83)	355 (161)
98-14E3-...	21.3 (541)	72.6 (1844)	12.1 (307)	-	-	-	485 (220)	937 (425)
98-73E2-...	16.8 (427)	60.1 (1527)	11.8 (300)	-	-	-	254 (115)	547 (248)

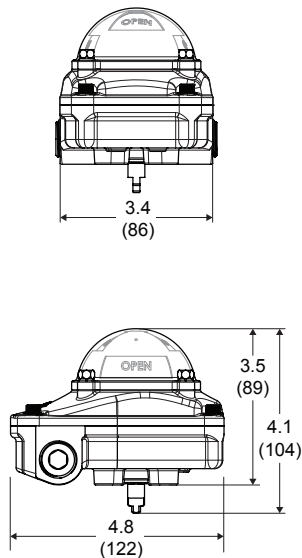
Allow 3.0" for Series 92/93 actuator removal and up to 12" for Series 98



**VP200 Pneumatic Positioner**



**Series 5A Switch Box**



**Series 6A Electro Pneumatic Positioner**

