

## FEATURES AND BENEFITS

- Corrosion resistant thermoplastic body, disc and handle.
- Ideal for On/Off service or for Throttling
- Full boot seal for durable performance
- No flange gaskets are required
- ANSI B16.5 Class 150 Flange Pattern
- Locking Polypropylene Handle with position indicator
- 100% Bubble tight seal
- Face to face dimensions match ©Asahi Type 56/57 BFV for direct retrofit. ©ASAHI/America, 35 Green St., Malden, MA 02148
- 3 Year Limited Warranty
- **Material choices: PVC/EPDM with PP Disc (411), PVC/FKM with PP Disc (412), CPVC/EPDM with CPVC Disc (413), CPVC/FKM with CPVC Disc (414).**
- Lug type available in PVC/EPDM with 304SS Lug Inserts. Install between two flanges using a separate set of bolts & washers for each flange. This setup permits either side of the piping system to be disconnected without disturbing the other side.
- See Bottom of Next Page for Bolt Set Information.

### Maximum operating pressure:

- For Wafer Type & Lug Type BFV installed in-line at: 150 PSI\* for 2 - 10", 100 PSI\* for 12"
- For Lug Type BFV used in "Dead-End" or "End-of-line" Service (No downstream flanges and disc in closed position): 3"- 12" 75 PSI\*

\*none-shock water at 73° F

- See NG + NGL Series for 2 - 16" sizes with gear operator



## SAMPLE ENGINEERING SPECIFICATIONS

Butterfly valves shall be lever actuated. Valve body and disc shall be produced of PVC Type I, cell classification 12454 or CPVC Type IV, cell classification 23447 or PP or material. Valve boot/seal and O-rings shall be made of EPDM, FKM or Buna-N (NBR) material. Stem shall be made of stainless steel. The disc bore (center) shall contain a integrally molded stainless steel reinforcement square liner, which engages with the stainless steel valve stem. Boot/seal (liner) and disc shall be the only wetted parts of the valve. Lever handle shall be produced of PP material, and shall be capable of locking in multiple, marked positions from opening to close. Bolt pattern shall conform to ANSI/ASME B 16.5 Class 150 standard. Maximum operating pressure for Wafer Type & Lug Type BFV installed in-line at ambient temperature is 150 PSI\* for 2 - 10", 100 PSI\* for 12". For Lug Type BFV used in "Dead-End" or "End-of-line" Service (No downstream flanges and disc in closed position): 3"- 12" 75 PSI\*.



411N SERIES (WAFER TYPE)



411NL SERIES (LUG TYPE)

Revised 5/23/22 Material selections re-stated

**CUSTOMER SERVICE:** 6400 Corporate Ave., Portage, MI 49002

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**TEMPERATURE DE-RATING FOR VALVES & UNIONS (ABOVE 73°)**

TEMP (°F)	PVC	CPVC	PP
73	1.00	1.00	1.00
80	0.88	0.96	0.93
90	0.75	0.92	0.83
100	0.62	0.85	0.74
110	0.50	0.77	0.66
120	0.40	0.70	0.58
130	0.30	0.62	0.51
140	0.22	0.55	0.40
150	NR	0.47	0.38
160	NR	0.40	0.35
170	NR	0.32	0.29
180	NR	0.25	0.23
200	NR	0.18	0.14
210	NR	0.15	0.10
240	NR	NR	NR
280	NR	NR	NR

NR: Not Recommended

Caution: Colonial recommends a minimum installation of 10 X the pipe diameter from a pump or other sources of turbulence.

**MAXIMUM RECOMMENDED TORQUE FOR FLANGE FASTENERS FOR INSTALLATION (ft lbs)**

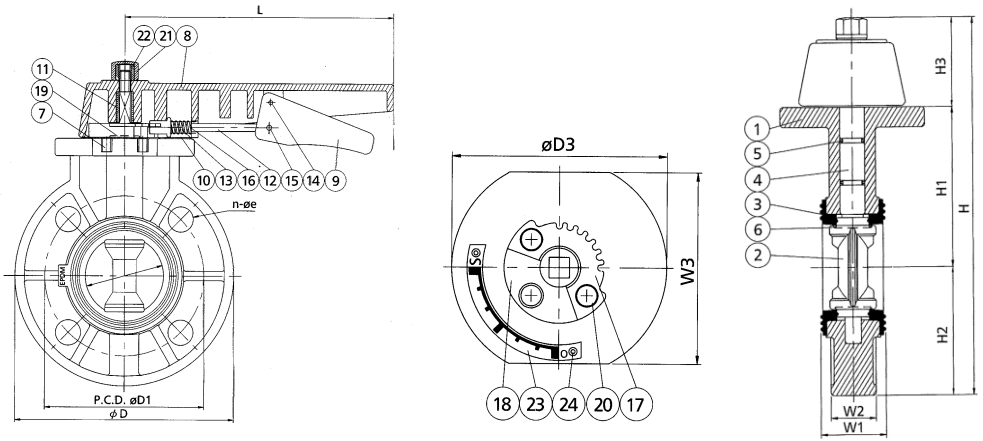
Size	Torque	Size	Torque
2	12	5	18
2 1/2	12	6	20
3	12	8	38
4	18	-	-

**OPENING TORQUE (in lbs)**

Size	Torque	Size	Torque
2	110	5	588
2 1/2	185	6	714
3	252	8	1260
4	378	-	-

**FLUID FLOW COEFFICIENT Cv\* @ 90° OPEN**  
\*Gallons per minute @ 1 psi pressure drop

Size	Cv	Size	Cv
2	100	5	650
2 1/2	190	6	1160
3	340	8	2200
4	420	-	-



**DIMENSIONS (inches)**

Size	2	2-1/2	3	4	5	6	8
D	6.5	7.28	7.87	9.02	10.12	11.22	13.50
D1	4.76	5.51	5.98	7.52	8.5	9.49	11.73
D2	2.22	2.74	3.13	4.04	5.12	6.02	7.99
D3	4.13	4.72	4.84	5.31	6.46	6.65	7.91
L	7.83	7.83	7.83	9.92	11.69	11.69	11.69
H	9.78	10.53	10.91	12.44	14.7	15.93	18.29
H1	4.06	4.45	4.53	5.33	6.50	6.97	8.27
H2	3.25	3.64	3.94	4.51	5.06	5.61	6.75
H3	2.48	2.44	2.44	2.60	3.15	3.27	3.27
W1	1.69	1.81	1.81	2.20	2.72	2.78	3.35
W2	1.38	1.42	1.42	1.85	2.24	2.44	2.99
W3	3.70	3.70	3.70	3.94	4.33	4.33	4.80
n-ø-e	4 - .75	4 - .75	4 - .75	8 - .75	8 - .87	8 - .87	8 - .87
411N wgt/lbs	2.40	2.80	3.30	5.30	8.50	12.20	17.70
411NL wgt/lbs	-	-	5.50	8.50	-	14.66	24.96

**PARTS AND MATERIALS**

Part Letter	Material	Part Letter	Material
1 Body	PVC, CPVC	13 Spring	SUS 304
2 Disc	PVC, CPVC, PP	14 Spring Pin	SUS 304
3 Seal	EPDM, FKM, BUNA	15 Spring Pin	SUS 304
4 Stem	SUS 410	16 Washer	SUS 304
5 Stem O-Ring	EPDM, FKM, BUNA	17 Locking Plate	SUS 304
6 Disc O-Ring	EPDM, FKM, BUNA	18 Gear Seat	PP+GF
7 Inserted Nut	C3604	19 Washer	SUS 304
8 Large Handle	PP	20 Bolt	SUS 304
9 Small Handle	PP	21 Nut	PVC
10 Spring Lock	PP	22 Insert Nut	C3604
11 Handle Insert	Stainless Steel	23 Lever	SUS 304
12 Handle Lever	SUS 304	24 Rivet	Stainless Steel

**SIZE & PART NUMBERS**

TYPE	WAFER	WAFER	WAFER	WAFER	WAFER	LUG
SIZE	PVC/EPDM w/PP Disc	PVC/BUNA w/PP Disc	PVC/FKM w/PP Disc	CPVC/EPDM	CPVC/FKM	PVC/EPDM w/PP Disc & SS LUG INSERTS
2	V20411N	-	V20412N	V20413N	V20414N	-
2-1/2"	V27411N	-	V27412N	V27413N	V27414N	-
3	V30411N	V30415N	V30412N	V30413N	V30414N	V30411NL
4	V40411N	V40415N	V40412N	V40413N	V40414N	V40411NL
5	V50411N	-	-	-	-	-
6	V60411N	V60415N	V60412N	V60413N	V60414N	V60411NL
8	V80411N	V80415N	V80412N	V80413N	V80414N	V80411NL

**Bolt Sets for Lug Type BFW 316SS**

Size	3	4	6	8
Part Number	V30LBFKS	V40LBFKS	V60LBFKS	V80LBFKS
Thread	1/2 - 13	1/2 - 13	5/8 - 11	5/8 - 11
Bolt length	2.00	2.25	2.75	3.25
Qty of Bolts & Washers Per Set	8	16	16	16

**Bolt Sets for Wafer Type BFW**

Size	2 - 3	4	6	8
Part Number 304SS	V30BFKS	V40BFKS	V60BFKS	V80BFKS
Part Number Galv	V30BFKG	V40BFKG	V60BFKG	V80BFKG
Part Number Zinc	V30BFKZ	V40BFKZ	V60BFKZ	V80BFKZ
Thread	5/8 - 11	5/8 - 11	3/4 - 10	3/4 - 10
Bolt length	5.50	6	7	8
Qty of Bolts & Washers Per Set	4	8	8	8

DO NOT USE WITH COMPRESSED AIR OR GAS

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