

## FEATURES AND BENEFITS

- Corrosion resistant thermoplastic body & disc.
- Compact and light weight design
- Full boot seal for durable performance
- ANSI B16.5 Class 150 Flange Pattern
- ISO 5211 compliant mounting pattern for actuators or gear operators.
- Pressure rating: 150 psi non-shock water @ 73° F 2-10", 100 psi for 12".
- With its robust boot/seal design, no flange gaskets are required
- 100% Bubble tight seal
- Face to face dimensions match Asahi Type 56/57 BFV for direct retrofit.



## SAMPLE ENGINEERING SPECIFICATIONS

Butterfly Valve body and disc shall be produced of PVC Type I, cell classification 12454 or CPVC Type IV, cell classification 23447 material. Valve boot/seal and O-rings shall be made of EPDM, of Viton® material. Shaft 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 shaft. Boot/seal (liner) and disc shall be the only wetted parts of the valve. ISO 5211 Mounting pattern on top for direct actuation mount. Bolt pattern shall conform to ANSI/ASME B 16.5 Class 150 standard. Colonial 411ND Series.



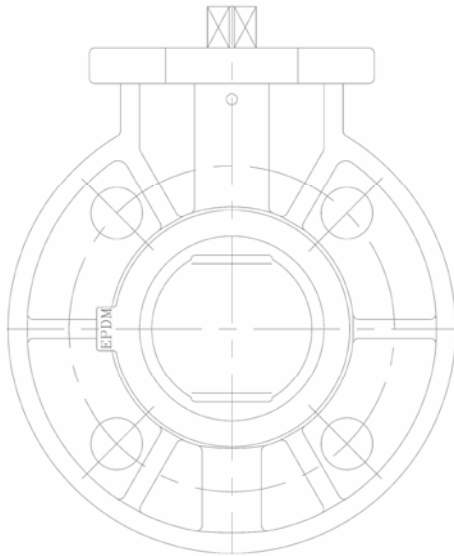
411ND SERIES BUTTERFLY VALVES – 2 - 12" DIRECT-MOUNT

Rev 3/09

**CUSTOMER SERVICE:** 6400 Corporate Ave., Portage, MI 49002  
Toll-free (800)374 0234, Phone (269)323 2495, Fax (269) 323 0630 [www.colonialengineering.com](http://www.colonialengineering.com)

Valve Size	ISO 5211 Mounting Pattern	Stem Sq.	Opening Torque ( In. Lbs.)	PVC/EPDM	PVC/Viton	CPVC/EPDM	CPVC/Viton	Max recommended torque for tightening flange bolts ( In. Lbs)
2	F05 & F07	11	113	<b>V20411ND</b>	V20412ND	V20414ND	V20413ND	150-170
3	F05 & F07	14	260	<b>V30411ND</b>	V30412ND	V30414ND	V30413ND	150-170
4	F07	14	391	<b>V40411ND</b>	V40412ND	V40414ND	V40413ND	185-215
6	F07 & F10	17	738	<b>V60411ND</b>	V60412ND	V60414ND	V60413ND	220-260
8	F10	22	1302	<b>V80411ND</b>	V80412ND	V80414ND	V80413ND	440-470
10	F10	22	2604	<b>V100411ND</b>	V100412ND	V100414ND	V100413ND	520-560
12	F12	27	3906	<b>V120411ND</b>	V120412ND	V120414ND	V120413ND	520-560

PVC Body with PP Disc and EPDM liner are stocked.  
PVC/Viton, CPVC/EPDM, CPVC/Viton are made to order.  
Check with Customer Service for lead-time.



Temperature De-rating for Valves & Unions (Above 73° F)				
Temp (°F)	PVC	CPVC	PP	PVDF
73	1.00	1.00	1.00	1.00
80	.88	.96	.93	.93
90	.75	.92	.83	.87
100	.62	.85	.74	.82
110	.50	.77	.66	.76
120	.40	.70	.58	.71
130	.30	.62	.51	.65
140	.22	.55	.40	.61
150	NR	.47	.38	.57
160	NR	.40	.35	.54
170	NR	.32	.29	.51
180	NR	.25	.23	.47
200	NR	.18	.14	.41
210	NR	.15	.10	.38
240	NR	NR	NR	.28
280	NR	NR	NR	.22
NR: Not Recommended				
Caution: Colonial recommends a minimum installation distance of 10 X the pipe diameter from a pump or other sources of turbulence.				

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