

Heavy-duty, full-face wafer-style Butterfly valves for controlling the flow of slurries, water, or chemicals. The gear operator with position indicator provides excellent throttling capability and ease of operation.

#### FEATURES AND BENEFITS

- Full boot-seal for durable performance (No flange gaskets required).
- 100% bubble tight shut-off.
- Bolt pattern meets ANSI/ASME B16.5 Class 150 standard.
- Bi-directional: can be installed in either direction.
- Painted cast iron gear box and hand wheel with stainless steel hardware. (non-submersible)

Note: Colonial also offers low-torque, lever-actuated butterfly valves in 2 through 8" sizes. See 411N Series or 311N Series.

#### MATERIAL OPTIONS

- PVC with PP Disc
- CPVC with CPVC Disc

#### SEAL OPTIONS

- EPDM
- Buna-N
- FKM

#### SAMPLE ENGINEERING SPECIFICATIONS

Thermoplastic butterfly valve bodies shall be constructed from PVC Type I, cell class 12454, or CPVC Type IV, cell class 23447 material (one-piece molded). Valve seals and o-rings shall be EPDM, FKM, or Buna-N. Bolt pattern shall conform to ANSI/ASME B 16.5 Class 150 standards. Disc shall be constructed of PP or CPVC material (one-piece molded with stainless steel reinforcement). Gear operator shall include a position indicator. Valves shall be pressure rated at 150 psi, non-shock water at 73° F (8 and 10") and 100 psi, non-shock water at 73° F (12").



Part numbers have been revised for CPVC/EPDM and CPVC/FKM.

Revised 8/1/14

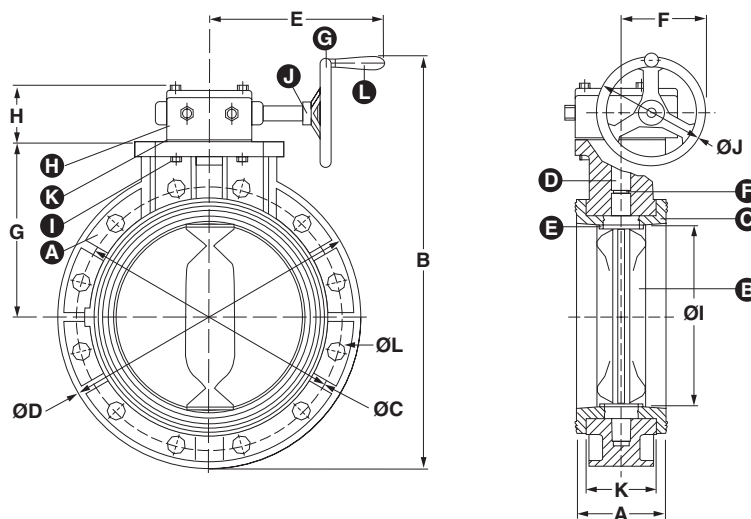
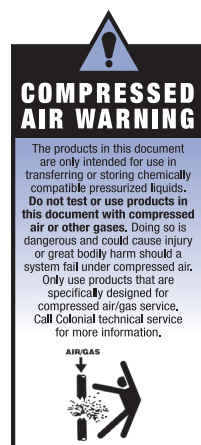
# TEMPERATURE CORRECTION FACTORS FOR VALVES & UNIONS (ABOVE 73° F)

| Temp (°F) | PVC  | CPVC |
|-----------|------|------|
| 73        | 1.00 | 1.00 |
| 80        | .88  | .96  |
| 90        | .75  | .92  |
| 100       | .62  | .85  |
| 110       | .50  | .77  |
| 120       | .40  | .70  |
| 130       | .30  | .62  |
| 140       | .22  | .55  |
| 150       | NR   | .47  |
| 160       | NR   | .40  |
| 170       | NR   | .32  |
| 180       | NR   | .25  |
| 200       | NR   | .18  |
| 210       | NR   | .15  |
| 240       | NR   | NR   |
| 280       | NR   | NR   |

NR: Not Recommended

## 411NG SERIES PART NUMBER TABLE

| Size | Material   | Part No.  |
|------|------------|-----------|
| 8"   | PVC/EPDM   | V80411NG  |
| 8"   | PVC/BUNA-N | V80415NG  |
| 8"   | PVC/FKM    | V80412NG  |
| 8"   | CPVC/FKM   | V80414NG  |
| 8"   | CPVC/EPDM  | V80413NG  |
| 10"  | PVC/EPDM   | V100411NG |
| 10"  | PVC/BUNA-N | V100415NG |
| 10"  | PVC/FKM    | V100412NG |
| 10"  | CPVC/FKM   | V100414NG |
| 10"  | CPVC/EPDM  | V100413NG |
| 12"  | PVC/EPDM   | V120411NG |
| 12"  | PVC/BUNA-N | V120415NG |
| 12"  | PVC/FKM    | V120412NG |
| 12"  | CPVC/FKM   | V120414NG |
| 12"  | CPVC/EPDM  | V120413NG |



## COMPONENTS AND MATERIALS

| Part Letter | Component     | Quantity | Material          |
|-------------|---------------|----------|-------------------|
| A           | Body          | 1        | PVC, CPVC*        |
| B           | Disc          | 1        | PP, CPVC*         |
| C           | Seal          | 1        | EPDM, FKM, Buna-N |
| D           | Stem          | 1        | 410 SS            |
| E           | O-Ring        | 2        | EPDM, FKM, Buna-N |
| F           | Stem O-Ring   | 2        | EPDM, FKM, Buna-N |
| G           | Handwheel     | 1        | Powder Paint      |
| H           | Gear Box      | 1        | Coated Metal      |
| I           | Bolt & Washer | 4        | 304 SS            |
| J           | Spring Pin    | 1        | Steel             |
| K           | Packing       | 1        | EPDM, FKM, Buna-N |
| L           | Small Handle  | 1        | Steel             |

\*CPVC material choices are special order. Call for price and availability.

## DIMENSIONS

| Size | A       | B        | ØC        | ØD       | E         | F       |
|------|---------|----------|-----------|----------|-----------|---------|
| 8"   | 3-7/16" | 21-1/4"  | 11-23/32" | 13-1/2"  | 10-29/32" | 6-3/16" |
| 10"  | 4-5/16" | 23-7/32" | 14-1/4"   | 16-3/16" | 10-15/16" | 6-3/16" |
| 12"  | 5-3/16" | 28-1/32" | 17"       | 19-9/32" | 13"       | 7-9/32" |

| Size | G         | H  | ØI       | ØJ       | K       | ØL*  |
|------|-----------|----|----------|----------|---------|------|
| 8"   | 8-9/32"   | 3" | 7-7/8"   | 7-7/8"   | 3-1/16" | 7/8" |
| 10"  | 9-7/16"   | 3" | 10-1/32" | 7-7/8"   | 3-3/4"  | 1"   |
| 12"  | 11-11/16" | 3" | 12-1/4"  | 9-27/32" | 4-1/2"  | 1"   |

\*Flange bolt hole diameter: 8" = 8 flange bolt holes; 10 and 12" = 12 flange bolt holes.

## WORKING PRESSURE AT 73°F

Non-shock water at 73° F.

| Valve Size | PSI |
|------------|-----|
| 8 and 10"  | 150 |
| 12"        | 100 |

## TORQUE OPENING (in lbs.)

| Valve Size | Opening Torque (lbs) |
|------------|----------------------|
| 8"         | 1,302                |
| 10"        | 2,604                |
| 12"        | 3,906                |