# Resilient-Seated Butterfly Valve Sizes 2 thru 20 inch, 200 psi

#### Features

- · Primary stem seal, formed by preloaded contact of disc hub with flatted seat surfaces, completely isolates stem and body from the line media.
- · Secondary stem seal, formed by an engineered interference fit of the stem through the seat, provides additional sealing integrity.
- Rounded, polished disc edge provides full 360 degree concentric seating, minimum flow restriction, lower seating and unseating torgues and maximum seat life.
- · Superior, one-piece thru-shaft design provides high-strength and positive disc control. Shaft ends are standardized for operator interchangeability.
- · Self-locking, stainless steel disc screws allow quick and easy disassembly and provide a positive connection.
- Self-adjusting, bi-directional stem seal is suitable for full industrial vacuum and pressure, preventing external contamination of the stem area.
- Heavy-duty, corrosion-resistant top bushing absorbs actuator side thrust loads.
- · Replaceable, metal-reinforced seat, completely encapsulated by rubber, isolates the stem and body from the media and eliminates seat distortion due to high vacuum or turbulence.
- Each valve is factory tested to 110 percent of specified pressure rating assures drop-tight shut-off.
- · Cast-in top plate is an integral part of the body and is standardized to allow direct mounting of all Keystone actuators.



Total Flow Control Solutions<sup>™</sup>



#### **Technical Data**

Pressure Rating: 200 psi

Sizes: 2 thru 20 inch

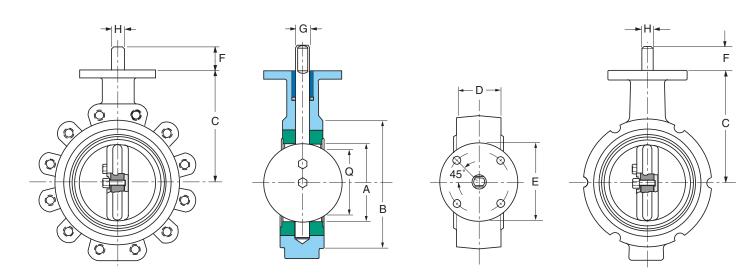
#### **General Applications**

The Figure 129 and Figure 139 are heavy duty, resilient-seated butterfly valves that are ideally suited for many industrial high performance applications, such as air, water and vacuum service. Figures 129 and 139 can also be used for marine and naval use where MIL-V-22133C specified valves are required. Consult factory for appropriate materials for other services.

### Materials of Construction

| Body:   | Cast irc<br>Ductile<br>Nickel a |                               |  |  |  |  |  |  |  |
|---------|---------------------------------|-------------------------------|--|--|--|--|--|--|--|
| Disc:   |                                 | um bronze<br>ainless steel    |  |  |  |  |  |  |  |
| Stem:   | 0.000                           | inless steel<br>ainless steel |  |  |  |  |  |  |  |
| Seat:   | NBR, E                          | PDM                           |  |  |  |  |  |  |  |
| Stem B  | ushing:                         | Polyester                     |  |  |  |  |  |  |  |
| Disc Sc | rews:                           | 316 Stainless steel<br>Monel® |  |  |  |  |  |  |  |
| Stem P  | acking:                         | NBR                           |  |  |  |  |  |  |  |

## **Dimensions**



| Valve Dimensions (inches)            |                                      |                                       |                                         |                                      |                                         |   |              |                  |                  |                                                           |                |               |                  |                                       |               |                                    |     |                                       |               |
|--------------------------------------|--------------------------------------|---------------------------------------|-----------------------------------------|--------------------------------------|-----------------------------------------|---|--------------|------------------|------------------|-----------------------------------------------------------|----------------|---------------|------------------|---------------------------------------|---------------|------------------------------------|-----|---------------------------------------|---------------|
| Size                                 |                                      |                                       |                                         |                                      |                                         |   | F            | G                |                  |                                                           | Top P          | late Drilling |                  | Tapped Lug Data                       |               |                                    |     |                                       |               |
|                                      | A                                    | В                                     | C                                       | D                                    | Q                                       | E |              |                  | н                | Key                                                       | Bolt<br>Circle | Bolt<br>Holes | No.<br>Diam.     | Bolt<br>Circle                        | Bolt<br>Holes | No.<br>Tap                         | • • | (lbs)<br>139                          | Adapt<br>Code |
| 2                                    | 2                                    | 41/8                                  | 315/16                                  | <b>1</b> 5/8                         | <b>1</b> 7/16                           | 4 | <b>1</b> 1/4 | 9/ <sub>16</sub> | 3/8              | N/A                                                       | 31/4           | 4             | 7/ <sub>16</sub> | 43/4                                  | 4             | <sup>5/8</sup> - 11NC              | 8   | 61/2                                  | BAB           |
| <b>2</b> <sup>1</sup> / <sub>2</sub> | <b>2</b> <sup>1</sup> / <sub>2</sub> | 47/8                                  | 41/2                                    | <b>1</b> 3/4                         | 2 <sup>1</sup> / <sub>16</sub>          | 4 | <b>1</b> 1/4 | <sup>9/16</sup>  | 3/ <sub>8</sub>  | N/A                                                       | 31/4           | 4             | <sup>7</sup> /16 | 5 <sup>1</sup> /2                     | 4             | <sup>5</sup> /8 - 11NC             | 9   | 8                                     | BAB           |
| 3                                    | 3                                    | 5 <sup>3/8</sup>                      | 47/8                                    | <b>1</b> 3/4                         | 211/16                                  | 4 | <b>1</b> 1/4 | 9/16             | 3/8              | N/A                                                       | 31/4           | 4             | 7/16             | 6                                     | 4             | <sup>5/8</sup> - 11NC              | 10  | 9 <sup>1</sup> / <sub>2</sub>         | BAB           |
| 4                                    | 4                                    | 67/8                                  | 6                                       | 2                                    | 33/4                                    | 4 | <b>1</b> 1/4 | 5/ <sub>8</sub>  | 7/ <sub>16</sub> | N/A                                                       | 31/4           | 4             | <sup>7</sup> /16 | 71/2                                  | 8             | <sup>5</sup> /8 - 11NC             | 18  | 14                                    | BAC           |
| 5                                    | 5                                    | 73/4                                  | 6                                       | 21/8                                 | 43/4                                    | 4 | <b>1</b> 1/4 | 5/ <sub>8</sub>  | <sup>7</sup> /16 | N/A                                                       | 31/4           | 4             | 7/16             | 81/2                                  | 8             | <sup>3</sup> / <sub>4</sub> - 10NC | 21  | <b>1</b> 5 <sup>1</sup> /2            | BAC           |
| 6                                    | 6                                    | 83/4                                  | 61/2                                    | 21/8                                 | 5 <sup>15/16</sup>                      | 4 | <b>1</b> 1/4 | 3/4              | 1/2              | N/A                                                       | 31/4           | 4             | 7/16             | <b>9</b> <sup>1</sup> / <sub>2</sub>  | 8             | 3/4 - 10NC                         | 25  | <b>18</b> 1/2                         | BAD           |
| 8                                    | 8                                    | 11                                    | 85/16                                   | <b>2</b> <sup>1</sup> / <sub>2</sub> | 77/8                                    | 6 | <b>1</b> 1/4 | 7/ <sub>8</sub>  | 5/ <sub>8</sub>  | N/A                                                       | 5              | 4             | <sup>9/</sup> 16 | 113/4                                 | 8             | <sup>3</sup> / <sub>4</sub> - 10NC | 44  | <b>34</b> <sup>1</sup> / <sub>2</sub> | CAE           |
| 10                                   | 10                                   | 133/8                                 | 9                                       | 21/2                                 | 915/16                                  | 6 | 2            | <b>1</b> 1/8     | N/A              | 1/4 <b>x</b> 1/4                                          | 5              | 4             | <sup>9/16</sup>  | <b>1</b> 41/4                         | 12            | 7/8 - 9NC                          | 61  | 47                                    | CAF           |
| 12                                   | 12                                   | <b>16</b> <sup>1</sup> /8             | 105/8                                   | 3                                    | 117/8                                   | 6 | 2            | <b>1</b> 1/8     | N/A              | 1/4 <b>x</b> 1/4                                          | 5              | 4             | <sup>9/16</sup>  | 17                                    | 12            | 7/8 - 9NC                          | 95  | 80                                    | CAF           |
| 14                                   | 13                                   | 175/8                                 | 12                                      | 3                                    | <b>12</b> <sup>13</sup> / <sub>16</sub> | 6 | 3            | <b>1</b> 3/8     | N/A              | <sup>5</sup> /16 x <sup>5</sup> /16                       | 5              | 4             | 9/16             | 183/4                                 | 12            | 1 - 8UNC                           | 131 | 115                                   | CAG           |
| 16                                   | 15                                   | 201/4                                 | <b>12</b> <sup>61</sup> / <sub>64</sub> | 4                                    | 143/4                                   | 6 | 3            | <b>1</b> 5/8     | N/A              | <sup>3</sup> / <sub>8</sub> x <sup>3</sup> / <sub>8</sub> | 5              | 4             | <sup>9/16</sup>  | <b>21</b> <sup>1</sup> / <sub>4</sub> | 16            | 1 - 8UNC                           | 221 | 210                                   | CAH           |
| 18                                   | 17                                   | <b>21</b> <sup>1</sup> / <sub>2</sub> | <b>1</b> 41/2                           | <b>4</b> 1/4                         | <b>16</b> <sup>11</sup> / <sub>16</sub> | 8 | 41/4         | <b>1</b> 7/8     | N/A              | 1/2 <b>x</b> 3/8                                          | 61/2           | 4             | 13/16            | 223/4                                 | 16            | 11/8 - 7UNC                        | 264 | 240                                   | DAJ           |
| 20                                   | 19                                   | 233/4                                 | 157/8                                   | 5                                    | 185/8                                   | 8 | 41/4         | <b>1</b> 7/8     | N/A              | 1/2 <b>X</b> 3/8                                          | 61/2           | 4             | 13/16            | 25                                    | 20            | 11/8 - 7UNC                        | 368 | 316                                   | DAJ           |

#### Notes

 'Q' dimension is the minimum allowable pipe or flange inside diameter at the centered body face to protect the disc sealing edge against damage when opening the valve.

- 2. 'B' dimensions refer to Figure 139 body O.D. dimensions.
- 3. Monel<sup>®</sup> is a registered trademark of the International Nickel Company.

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