Stainless Steel Butterfly Valves

SERIES
486
ANSI and Metric Flange Compatible
All stainless steel butterfly valve

The Series 486 inflatable seated butterfly valve from Posi-flate features a fully machined 316L stainless steel housing. The single piece disc and shaft is available in a number of materials including 316L stainless steel and hastelloy. The disc may be polished to a mirror finish or coated with PTFE, nylon or other high performance coating.

The stainless steel valve is ideal for powders, granules, slurries and liquids and is available in sizes 2" (50mm) to 20" (500mm). Typical applications include loading and unloading of process material, sterile air control, and outlet valves for storage containers or hoppers.

Unique inflatable seat provides better seal, less wear, longer life

Posi-flate’s unique inflatable seat design provides a better seal by utilizing air pressure to expand the seat against the disc, providing more sealing area and an even pressure distribution against the disc every time. The inflatable seat automatically compensates for wear when it inflates against the disc which extends the valve life considerably.

Torque requirements are substantially lower with the Posi-flate butterfly valve since the disc does not impinge the seat. The smooth profile of the disc provides minimum flow resistance and reduces material build-up.

How it works

Closed, unsealed
As the valve rotates into the closed position, the disc makes only casual contact with the seat, reducing friction, wear and torque requirements.

Closed, sealed
After the valve is closed, the seat inflates against the disc providing more sealing surface and an even pressure distribution against the disc.

Open, unsealed
Before the valve opens, the seat is first deflated. The disc is then free to rotate to the open position.
Design features for reliable performance

A. ACTUATOR MOUNTING FLANGE:
   Flange is designed for direct actuator mounting.

B. BEARINGS:
   Multiple bearings substantially reduce operating friction and torque requirements, eliminating any metal-to-metal contact, thus preventing shaft galling and freezing.

C. SHAFT SEALS:
   O-ring shaft seals insure positive sealing under the most adverse conditions.

D. SEAT O-RING SEAL:
   O-ring provides long lasting positive seal of seat inflation pressure.

E. MATERIAL SEAL:
   Land seal prevents material contamination of seat o-ring seal.

F. AIR INLET PORT:
   Oversized inlet port allows quick valve pressurization/depressurization.

G. DISC/SHAFT:
   Integral disc and shaft with smooth, contoured surface provides minimum resistance to flow and reduces material buildup.

H. SPLIT HOUSING:
   Rugged two-piece body fits standard 125/150 class ANSI flat-faced flanges and PN 10 metric flanges. Minimizes assembly time and allows for integral shaft and disc.

I. HOUSING GASKET:
   Die cut elastomeric gasket assures leakproof housing.

J. HOUSING BOLTS:
   High strength steel bolts maintain structural integrity of housing under the most adverse conditions.

K. RESILIENT SEAT:
   Easily replaceable, the inflatable molded seat has a smooth contour locking design to minimize stress and hold the seat in place, eliminating any need for flange gaskets.

Performance features

- Inflatable seat compensates for disc and seat wear
- Longer valve life
- Minimal seat wear
- No disc impingement
- Ultra-low torque requirements
- Lower actuator costs
- More seal contact area
- Excellent for abrasive and dry solids
- Disc designed to prevent material buildup
- Double shaft seals
- Multiple bearings
- Fail-safe monitoring
**Dimensions and Specifications**

<table>
<thead>
<tr>
<th>Valve Size</th>
<th>Approx. Weight</th>
<th>Normal Torque</th>
<th>Posi-flate Butterfly Valves Series 486 with Stainless Steel Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min. lbs.</td>
<td>Max. lbs.</td>
<td>G</td>
</tr>
<tr>
<td>2&quot;/50mm</td>
<td>8 lbs.</td>
<td>10 lbs.</td>
<td>2.00</td>
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<tr>
<td>3&quot;/80mm</td>
<td>9 lbs.</td>
<td>11 lbs.</td>
<td>2.00</td>
</tr>
<tr>
<td>4&quot;/100mm</td>
<td>10 lbs.</td>
<td>12 lbs.</td>
<td>2.00</td>
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<tr>
<td>5&quot;/125mm</td>
<td>12 lbs.</td>
<td>14 lbs.</td>
<td>2.00</td>
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<tr>
<td>6&quot;/150mm</td>
<td>15 lbs.</td>
<td>17 lbs.</td>
<td>2.00</td>
</tr>
<tr>
<td>8&quot;/200mm</td>
<td>18 lbs.</td>
<td>20 lbs.</td>
<td>2.00</td>
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<tr>
<td>10&quot;/250mm</td>
<td>22 lbs.</td>
<td>24 lbs.</td>
<td>2.00</td>
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<tr>
<td>12&quot;/300mm</td>
<td>27 lbs.</td>
<td>29 lbs.</td>
<td>2.00</td>
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<tr>
<td>14&quot;/350mm</td>
<td>32 lbs.</td>
<td>34 lbs.</td>
<td>2.00</td>
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<tr>
<td>16&quot;/400mm</td>
<td>38 lbs.</td>
<td>40 lbs.</td>
<td>2.00</td>
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<tr>
<td>18&quot;/450mm</td>
<td>45 lbs.</td>
<td>48 lbs.</td>
<td>2.00</td>
</tr>
<tr>
<td>20&quot;/500mm</td>
<td>53 lbs.</td>
<td>56 lbs.</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**Available Materials of Construction:**

- **Housing:** 316L stainless steel housing with satin finish or polished finish
- **Disc/shaft:** Integral 316L stainless steel disc/shaft with standard satin polish or premium polish; hastelloy disc/shaft; PTFE coating
- **Seat:** White FDA Buna-N, white FDA silicone, white fluorooelastomer, black fluorooelastomer, black EPDM and others
- **Bearings:** Nylon, bronze or PTFE
- **Shaft Seal:** Buna-N or fluorooelastomer
- **Housing Gasket:** Buna-N or silicone
- **Hardware:** Stainless steel

**Temperature limits:** -40° to 350° F (-40° to 175° C), varies with application and materials of construction.

**Air supply:** 115 PSIG (7.9 bar) maximum to seat, varies with application.

**Working pressure:** Full vacuum to 100 PSIG (6.9 bar), varies with materials of construction.

**Operating torque:** Varies with application.