# Inflatable Seated Butterfly Valves

## HEAVY DUTY SERIES

## 585
## 586


posi-flate®
butterfly valves


# Less friction, low torque, less wear, longer life.

Posi-flate's unique butterfly valve design uses air pressure to expand the seat against the disc, providing even pressure distribution for a bubble-tight seal, every time. Because the seat makes only casual contact with the disc during valve opening and closing, there is minimal disc impingement. This is in contrast to conventional butterfly valves where disc impingement leads to shaving of the seat, decreasing the overall performance and valve life.

Substantially less torque is required to open and close the Posi-flate butterfly valve, thus a smaller actuator can be used resulting in lower overall valve cost.

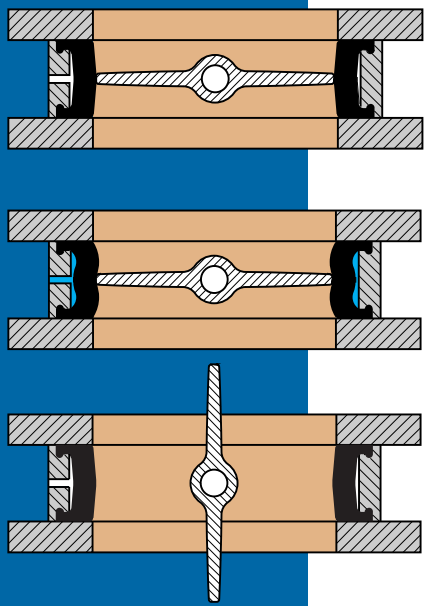
In actual comparison tests and documented field applications, the Posi-flate butterfly valve outperformed all other valves. In fact, a Posi-flate valve life of one to three million cycles, even in extremely abrasive applications, is not uncommon. For dry solids, gases and slurry applications, the Posi-flate inflatable seated butterfly valve is unsurpassed.

The Posi-flate Series 585/586 inflatable seated butterfly valve is designed for the most severe conditions. The seat is designed for heavy duty applications and higher operating pressures. Standard valve sizes range from 2" (50 mm) to 24" (600 mm) and fit both ANSI and metric flanges. A full line of actuators, limit switches and controls are available to suit individual applications.

## Performance Features

- Heavy duty
- 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
- Proven excellent for abrasive and dry solids
- Disc designed to prevent material buildup
- Double shaft seals
- Multiple bearings
- Fail-safe monitoring

# 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.** RETAINING RING: Retaining ring simplifies bearing and seal removal and ensures positive bearing retention.

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

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

**E.** SHAFT: Corrosion resistant, high strength steel shaft is easily replaceable.

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

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

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

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

**J.** DISC: Smooth contoured surface assures extended seat life and disc is easily replaceable.

**K.** DISC SCREWS: Self-locking screws of high tensile steel provide strong link between disc and shaft, yet allow easy disassembly.

**L.** HOUSING: Rugged one-piece body fits standard 125/150 class ANSI flat-faced flanges and PN 10 metric flanges.

**M.** HOUSING GASKET: Die cut elastomeric gasket assures leakproof housing.

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

**O.** 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.

**P.** 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.

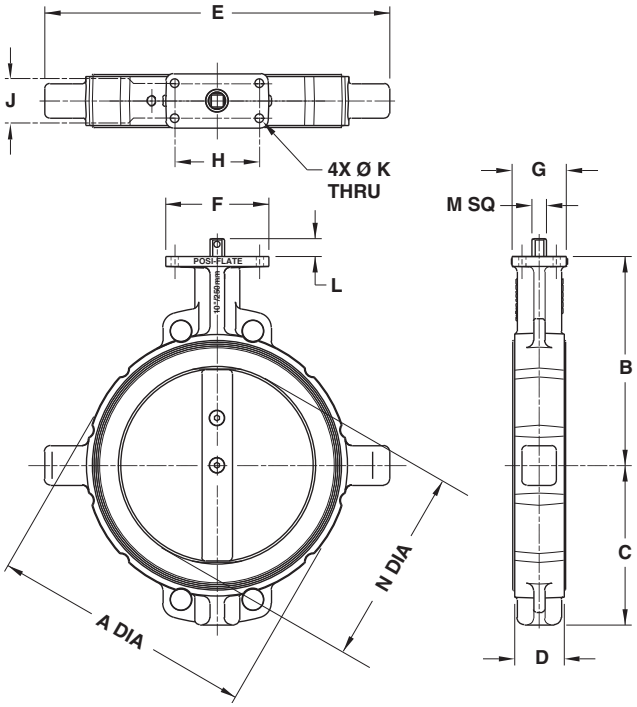

SERIES 585


SERIES 586

posi-flate®
butterfly valves

| Valve Size | | Posi-flate Butterfly Valve Series 585 and 586 Dimensions* (Inches) | | | | | | | | | | | | | Approx. Weight (Pounds) | Normal Torque (Inch Pounds) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Inch | mm | A | B | C | D | E | F | G | H | J | K | L | M | N | | Min. | Max. |
| 2" | 50mm | 4.52 | 4.50 | 2.91 | 1.62 | 6.50 | 4.00 | 2.12 | 3.25 | 1.17 | .31 | .78 | .43 | 1.99 | 8 | 40 | 450 |
| 3" | 80mm | 5.65 | 5.56 | 3.57 | 1.75 | 8.19 | 4.00 | 2.12 | 3.25 | 1.17 | .31 | .81 | .43 | 2.89 | 10 | 80 | 450 |
| 4" | 100mm | 6.88 | 7.58 | 4.42 | 2.00 | 8.88 | 4.00 | 2.12 | 3.25 | 1.17 | .31 | .70 | .43 | 3.88 | 16 | 130 | 450 |
| 5" | 125mm | 7.75 | 7.95 | 6.05 | 2.12 | 9.62 | 4.00 | 2.12 | 3.25 | 1.17 | .31 | .86 | .55 | 4.92 | 19 | 260 | 450 |
| 6" | 150mm | 8.75 | 7.95 | 6.05 | 2.12 | 10.69 | 4.00 | 2.12 | 3.25 | 1.17 | .31 | .86 | .55 | 5.88 | 22 | 300 | 450 |
| 8" | 200mm | 11.12 | 9.87 | 7.24 | 2.50 | 14.00 | 5.25 | 2.75 | 4.31 | 1.75 | .38 | .88 | .75 | 7.86 | 37 | 540 | 1300 |
| 10" | 250mm | 13.31 | 10.56 | 8.06 | 2.50 | 17.50 | 5.25 | 2.75 | 4.31 | 1.75 | .38 | .93 | .75 | 9.81 | 45 | 860 | 1300 |
| 12" | 300mm | 15.50 | 14.28 | 9.52 | 3.00 | 20.25 | 4.00 | 4.00 | 2.84 | 2.84 | .44 | 1.25 | .87 | 11.83 | 80 | 1240 | 2480 |
| 14" | 350mm | 17.72 | 16.00 | 10.50 | 3.00 | 22.00 | 4.00 | 4.00 | 2.84 | 2.84 | .44 | 1.02 | .87 | 13.08 | 150 | 2100 | 6200 |
| 16" | 400mm | 19.75 | 16.93 | 12.40 | 4.25 | 24.75 | 7.63 | 4.62 | 3.48 | 3.48 | .53 | 1.29 | 1.06 | 15.02 | 180 | 3500 | 9600 |
| 18" | 450mm | 21.46 | 15.84 | 13.30 | 4.25 | 26.84 | 7.37 | 4.75 | 3.48 | 3.48 | .53 | 1.29 | 1.06 | 17.13 | 235 | 4800 | 12150 |
| 20" | 500mm | 23.75 | 17.38 | 14.38 | 5.00 | 30.00 | 7.37 | 5.50 | 3.90 | 3.90 | .69 | 1.57 | 1.42 | 18.68 | 275 | 7800 | 15600 |
| 24" | 600mm | 28.00 | 19.12 | 16.49 | 5.94 | 34.50 | 8.00 | 5.75 | 3.90 | 3.90 | .69 | 1.48 | 1.42 | 22.65 | 420 | 9400 | 18800 |

** Series 585 available in 4" (100 mm) to 24" (600 mm). Series 586 available in 2" (50 mm) to 24" (600 mm).*




## Available Materials of Construction:

**Housing:** Cast iron, stainless steel, aluminum, nickel-plated cast iron, epoxy coated cast iron, nylon coated cast iron.

**Resilient Seat:** EPDM, Buna-N, polyurethane, fluoroelastomer, FDA silicone, FDA white Buna-N, FDA white EPDM, FDA white fluoroelastomer.

**585 Disc:** Cast iron, 316 stainless steel.

**586 Disc/Shaft:** 316 stainless steel (satin or polished), molded nylon over stainless steel shaft, superalloy, cast iron. PTFE and other custom coatings available.

**Bearings:** Polymer, bronze.

**585 Disc Screws:** Carbon steel, stainless steel.

**585 Shaft:** Zinc-plated carbon steel, 316 stainless steel.

**Shaft Seal:** Buna-N, silicone, fluoroelastomer, EPDM.

**Housing Gasket:** Buna-N (Series 586), silicone, EPDM.

**Retaining Ring:** Carbon steel, stainless steel.

**Housing Bolts:** Carbon steel, stainless steel.

All specifications subject to change without notice.
Customized materials available.
Posi-flate® is a registered trademark of Posi-flate, St. Paul, Minnesota.

Made in the U.S.A.
Foreign patents pending.


Printed in U.S.A. • Bulletin 20810-3 (dm)

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

**Air supply:** 135 psig (9.3 bar) maximum to seat, varies with materials of construction and application.

**Working pressure:** Full vacuum to 150 psig (10.3 bar) depending on materials of construction and application.

**Operating torque:** Varies with application.

SERIES
## 585

Single piece housing with two piece disc and shaft.
Sizes 4" (100mm)* to 24" (600mm).

SERIES
## 586

Split housing with one piece disc and shaft.
Sizes 2" (50mm) to 24" (600mm).

** Series 585 4" valve features a split housing for ease of assembly.*

**posi-flate®**
**butterfly valves**

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Brazil • China • United Kingdom

**www.posiflate.com**

# Inflatable Seated Butterfly Valves

SERIES

485
486
487
488

ANSI and Metric
Flange Compatible


posi-flate®
butterfly valves



## 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
- Proven excellent for abrasive and dry solids
- Disc designed to prevent material buildup
- Double shaft seals
- Multiple bearings
- Fail-safe monitoring

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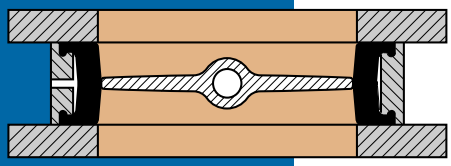
Substantially less torque is required to open and close the Posi-flate butterfly valve, thus a smaller actuator can be used resulting in lower overall valve cost.

In actual comparison tests and documented field applications, the Posi-flate butterfly valve outperformed all other valves. In fact, a Posi-flate valve life of one to three million cycles, even in extremely abrasive applications, is not uncommon. For dry solids, gases and slurry applications, the Posi-flate inflatable seated butterfly valve is unsurpassed.

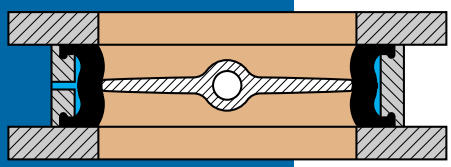
Standard valve sizes range from 2" (50mm) to 30" (800mm) and fit both ANSI and metric flanges. A full line of actuators, limit switches and controls are available to suit individual applications.

# How it works



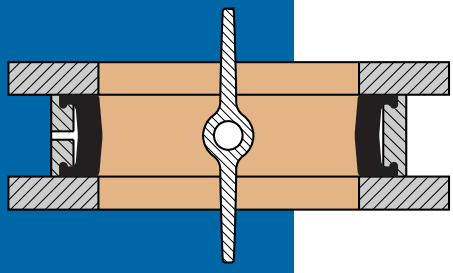
***Closed, unsealed***

*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.** RETAINING RING: Retaining ring simplifies bearing and seal removal and ensures positive bearing retention.

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

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

**E.** SHAFT: Corrosion resistant, high strength steel shaft is easily replaceable.

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

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

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

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

**J.** DISC: Smooth contoured surface assures extended seat life and disc is easily replaceable.

**K.** DISC SCREWS: Self-locking screws of high tensile steel provide strong link between disc and shaft, yet allow easy disassembly.

**L.** HOUSING: Rugged one-piece body fits standard 125/150 class ANSI flat-faced flanges and PN 10 metric flanges.

**M.** HOUSING GASKET: Die cut elastomeric gasket assures leakproof housing.

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

**O.** 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.

**P.** 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.


U.S. Patent 4836499

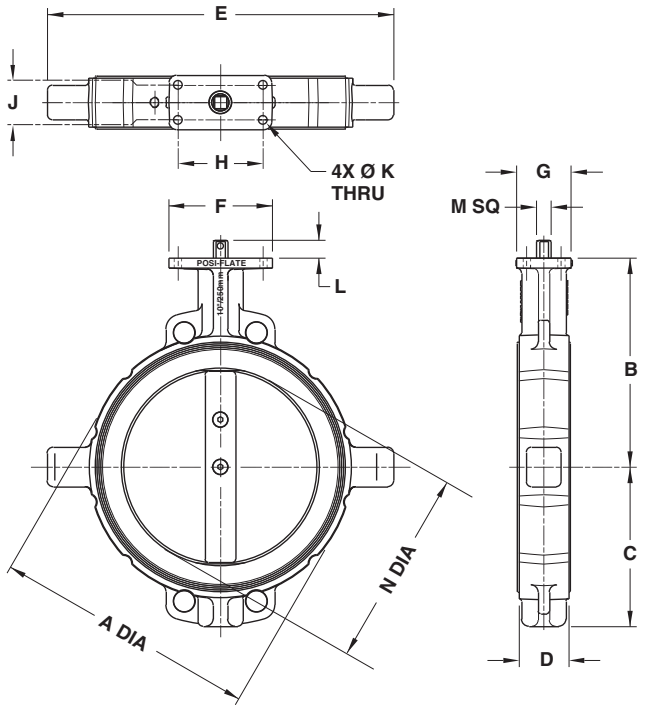
SERIES 485


SERIES 486

posi-flate®
butterfly valves

| Valve Size | | Posi-flate Butterfly Valve Series 485, 486, 487 and 488 Dimensions* (Inches) | | | | | | | | | | | | | Approx. Weight (Pounds) | Normal Torque (Inch Pounds) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Inch | mm | A | B | C | D | E | F | G | H | J | K | L | M | N | | Min. | Max. |
| 2" | 50mm | 4.52 | 4.50 | 2.91 | 1.62 | 6.50 | 4.00 | 2.12 | 3.25 | 1.17 | .31 | .78 | .43 | 1.99 | 8 | 40 | 450 |
| 3" | 80mm | 5.65 | 5.56 | 3.57 | 1.75 | 8.19 | 4.00 | 2.12 | 3.25 | 1.17 | .31 | .81 | .43 | 2.89 | 10 | 80 | 450 |
| 4" | 100mm | 6.88 | 7.58 | 4.42 | 2.00 | 8.88 | 4.00 | 2.12 | 3.25 | 1.17 | .31 | .70 | .43 | 3.88 | 16 | 130 | 450 |
| 5" | 125mm | 7.75 | 7.95 | 6.05 | 2.12 | 9.62 | 4.00 | 2.12 | 3.25 | 1.17 | .31 | .86 | .55 | 4.92 | 19 | 260 | 450 |
| 6" | 150mm | 8.75 | 7.95 | 6.05 | 2.12 | 10.69 | 4.00 | 2.12 | 3.25 | 1.17 | .31 | .86 | .55 | 5.88 | 22 | 300 | 450 |
| 8" | 200mm | 11.12 | 9.87 | 7.24 | 2.50 | 14.00 | 5.25 | 2.75 | 4.31 | 1.75 | .38 | .88 | .75 | 7.86 | 37 | 540 | 1300 |
| 10" | 250mm | 13.31 | 10.56 | 8.06 | 2.50 | 17.50 | 5.25 | 2.75 | 4.31 | 1.75 | .38 | .93 | .75 | 9.81 | 45 | 860 | 1300 |
| 12" | 300mm | 15.50 | 14.28 | 9.52 | 3.00 | 20.25 | 4.00 | 4.00 | 2.84 | 2.84 | .44 | 1.25 | .87 | 11.83 | 80 | 1240 | 2480 |
| 14" | 350mm | 17.72 | 16.00 | 10.50 | 3.00 | 22.00 | 4.00 | 4.00 | 2.84 | 2.84 | .44 | 1.02 | .87 | 13.08 | 150 | 2100 | 6200 |
| 16" | 400mm | 19.75 | 16.93 | 12.40 | 4.00 | 24.75 | 7.63 | 4.62 | 3.48 | 3.48 | .53 | 1.29 | 1.06 | 15.02 | 180 | 3500 | 9600 |
| 18" | 450mm | 21.46 | 15.84 | 13.30 | 4.25 | 26.84 | 7.37 | 4.75 | 3.48 | 3.48 | .53 | 1.29 | 1.06 | 17.13 | 235 | 4800 | 12150 |
| 20" | 500mm | 23.75 | 17.38 | 14.38 | 5.00 | 30.00 | 7.37 | 5.50 | 3.90 | 3.90 | .69 | 1.57 | 1.42 | 18.68 | 275 | 7800 | 15600 |
| 24" | 600mm | 28.00 | 19.12 | 16.49 | 5.94 | 34.50 | 8.00 | 5.75 | 3.90 | 3.90 | .69 | 1.48 | 1.42 | 22.65 | 420 | 9400 | 18800 |
| 30" | 800mm | 35.88 | 23.00 | 21.00 | 6.62 | 43.00 | 8.00 | 5.75 | 3.90 | 3.90 | .69 | 1.56 | 1.42 | 28.41 | 750 | 11000 | 22000 |

** Series 485 available in 5" (125mm) to 30" (800mm). Series 486 available in 2" (50mm) to 30" (800mm). Series 487 available in 4" (100mm). Series 488 available in 2" (50mm) and 3" (80mm).*




## Available Materials of Construction:

**Housing:** Cast iron, stainless steel, aluminum, nickel-plated cast iron, epoxy coated cast iron, nylon coated cast iron

**Resilient Seat:** EPDM, Buna-N, polyurethane, fluoroelastomer, FDA silicone, FDA white Buna-N, FDA white EPDM, FDA white fluoroelastomer

**Disc:** Cast iron, 316 stainless steel (satin or polished), molded nylon. PTFE, nickel and nylon coating available

**Bearings:** Polymer, bronze

**Disc Screws:** Carbon steel, stainless steel

**Shaft:** Zinc-plated carbon steel, 316 stainless steel

**Shaft Seal:** Buna-N, fluoroelastomer

**Housing Gasket:** Buna-N (Series 486, 487, 488)

**Retaining Ring:** Carbon steel, stainless steel

**Housing Bolts:** Carbon steel, stainless steel

All specifications subject to change without notice.
Customized materials available.
Posi-flate® is a registered trademark of Posi-flate, St. Paul, Minnesota.

Made in the U.S.A.
Foreign patents pending.


Printed in U.S.A. • Bulletin 9901-6 (dm)

**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.

### SERIES 485

Single piece housing with disc and shaft.
Sizes 5" (125mm) to 30" (800mm).

### SERIES 486

Split housing with integral stainless steel disc and shaft or integral molded nylon disc and stainless steel shaft.
Sizes 2" (50mm) to 30" (800mm).

### SERIES 487

Split housing with disc and shaft. Size 4" (100mm).

### SERIES 488

Split housing with integral cast iron disc and shaft.
Sizes 2" (50mm) and 3" (80mm).

**posi-flate®**
**butterfly valves**

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**Worldwide Offices**
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**www.posiflate.com**

# Stainless Steel Butterfly Valves

SERIES
486

ANSI and Metric
Flange Compatible

posi-flate®
butterfly valves


# 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.

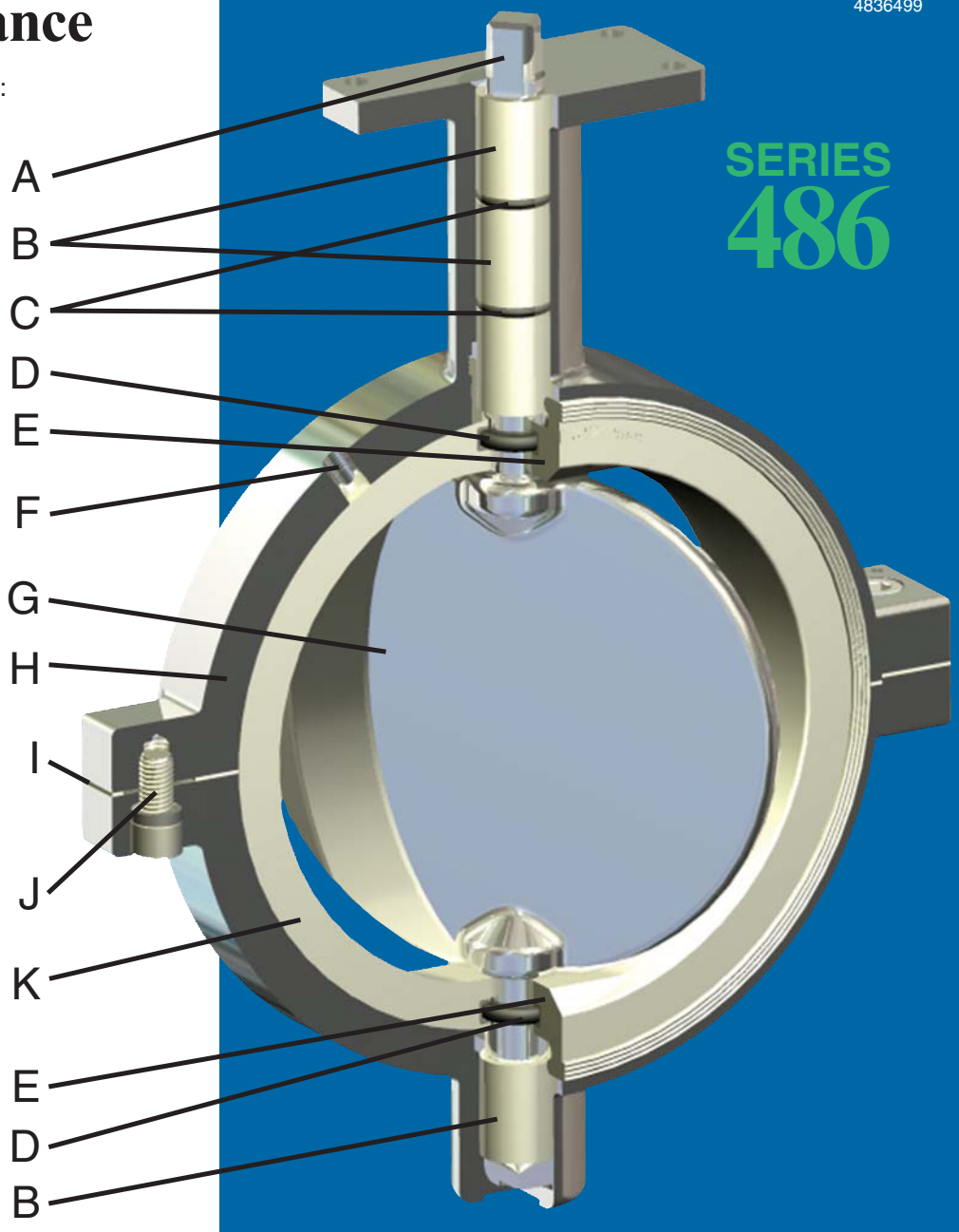
**I.** HOUSING GASKET:
Die cut elastomeric gasket assures leakproof housing.

**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.

U.S. Patent 4836499

SERIES 486

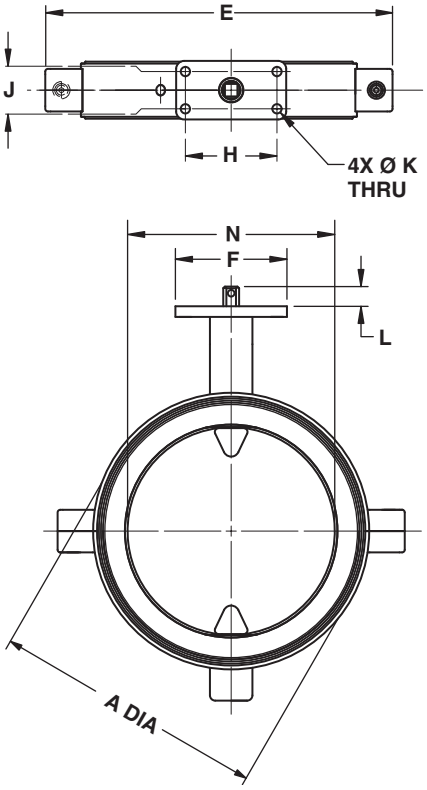



## Performance features

- 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

| Valve Size | Posi-flate Butterfly Valves Series 486 with Stainless Steel Housing<br>inches / millimeters | | | | | | | | | | | | | Approx. Weight | Normal Torque<br>in. lbs. / Nm | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | J | K | L | M | N | | Min. | Max. |
| 2"/50mm | 4.13 | 4.50 | 2.00 | 1.62 | 5.84 | 4.00 | 1.75 | 3.25 | 1.17 | 0.31 | 0.78 | 0.43 | 2.00 | 8 lbs. | 40 | 450 |
| | 105 | 114 | 51 | 41 | 148 | 102 | 44 | 83 | 30 | 8 | 20 | 11 | 51 | 3.6 kg | 5 | 51 |
| 3"/80mm | 5.31 | 5.56 | 3.95 | 1.75 | 8.09 | 4.00 | 1.75 | 3.25 | 1.17 | 0.31 | 0.81 | 0.43 | 2.90 | 9 lbs. | 80 | 450 |
| | 135 | 141 | 100 | 44 | 205 | 102 | 44 | 83 | 30 | 8 | 21 | 11 | 74 | 4.1 kg | 9 | 51 |
| 4"/100mm | 6.46 | 7.58 | 4.60 | 2.00 | 9.28 | 4.00 | 2.00 | 3.25 | 1.17 | 0.31 | 0.70 | 0.43 | 3.88 | 15 lbs. | 130 | 450 |
| | 164 | 193 | 117 | 51 | 236 | 102 | 51 | 83 | 30 | 8 | 18 | 11 | 99 | 6.8 kg | 15 | 51 |
| 5"/125mm | 7.63 | 7.95 | 4.83 | 2.12 | 9.68 | 4.00 | 2.12 | 3.25 | 1.17 | 0.31 | 0.86 | 0.55 | 4.92 | 17 lbs. | 260 | 450 |
| | 194 | 202 | 123 | 54 | 246 | 102 | 54 | 83 | 30 | 8 | 22 | 14 | 125 | 7.7 kg | 29 | 51 |
| 6"/150mm | 8.66 | 7.95 | 5.82 | 2.12 | 10.73 | 4.00 | 2.12 | 3.25 | 1.17 | 0.31 | 0.86 | 0.55 | 5.88 | 19 lbs. | 300 | 450 |
| | 220 | 202 | 148 | 54 | 273 | 102 | 54 | 83 | 30 | 8 | 22 | 14 | 149 | 8.6 kg | 34 | 51 |
| 8"/200mm | 10.83 | 9.87 | 7.21 | 2.50 | 13.64 | 5.25 | 2.50 | 4.31 | 1.75 | 0.38 | 0.88 | 0.75 | 7.86 | 34 lbs. | 540 | 1300 |
| | 275 | 251 | 183 | 64 | 346 | 133 | 64 | 109 | 44 | 10 | 22 | 19 | 200 | 15.4 kg | 61 | 147 |
| 10"/250mm | 12.99 | 10.56 | 7.97 | 2.50 | 16.34 | 5.25 | 2.50 | 4.31 | 1.75 | 0.38 | 0.93 | 0.75 | 9.81 | 48 lbs. | 860 | 1300 |
| | 330 | 268 | 202 | 64 | 415 | 133 | 64 | 109 | 44 | 10 | 24 | 19 | 249 | 21.8 kg | 97 | 147 |
| 12"/300mm | 14.88 | 14.28 | 9.71 | 3.00 | 18.58 | 4.00 | 4.00 | 2.84 | 2.84 | 0.44 | 1.25 | 0.87 | 11.83 | 88 lbs. | 1240 | 2480 |
| | 378 | 363 | 247 | 76 | 472 | 102 | 102 | 72 | 72 | 11 | 32 | 22 | 300 | 40 kg | 140 | 280 |
| 14"/350mm | 17.25 | 16.00 | 11.38 | 3.00 | 21.05 | 4.00 | 4.00 | 2.84 | 2.84 | 0.44 | 1.02 | 0.87 | 13.08 | 113 lbs. | 2100 | 6200 |
| | 438 | 406 | 289 | 76 | 535 | 102 | 102 | 72 | 72 | 11 | 26 | 22 | 332 | 51.3 kg | 237 | 701 |
| 16"/400mm | 19.33 | 16.93 | 11.75 | 4.00 | 23.10 | 4.75 | 4.75 | 3.48 | 3.48 | 0.53 | 1.29 | 1.06 | 15.02 | 147 lbs. | 3500 | 9600 |
| | 491 | 430 | 298 | 102 | 587 | 121 | 121 | 88 | 88 | 13 | 33 | 27 | 382 | 66.7 kg | 395 | 1085 |
| 18"/450mm | 21.23 | 15.84 | 13.36 | 4.25 | 25.09 | 4.75 | 4.75 | 3.48 | 3.48 | 0.57 | 1.31 | 1.06 | 17.26 | 188 lbs. | 4800 | 12150 |
| | 539 | 402 | 339 | 108 | 637 | 121 | 121 | 88 | 88 | 14 | 33 | 27 | 438 | 85.4 kg | 542 | 1373 |
| 20"/500mm | 23.39 | 17.38 | 14.11 | 5.00 | 27.24 | 5.75 | 5.75 | 3.90 | 3.90 | 0.69 | 1.57 | 1.42 | 18.69 | 211 lbs. | 7800 | 15600 |
| | 594 | 441 | 358 | 127 | 692 | 146 | 146 | 99 | 99 | 18 | 40 | 36 | 475 | 95.8 kg | 881 | 1763 |




**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.

## 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 fluoroelastomer, black fluoroelastomer, black EPDM and others

**Bearings:** Nylon, bronze or PTFE

**Shaft Seal:** Buna-N or fluoroelastomer

**Housing Gasket:** Buna-N or silicone

**Hardware:** Stainless steel

All specifications subject to change without notice.
Customized materials available.
Posi-flate® is a registered trademark of Posi-flate, St. Paul, Minnesota.

Made in the U.S.A.
Foreign patents pending.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posi-flate®
butterfly valves

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butterfly valves

# Series 470 High Temperature Butterfly Valve

The Posi-flate Series 470 High Temperature Butterfly Valve is an elastomeric seated valve capable of providing a bubble-tight seal at temperatures up to 650° F and pressures up to 200 psi.

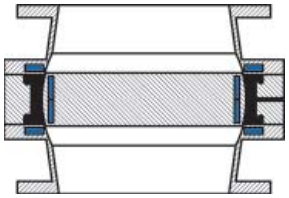
The valve features Posi-fate's unique inflatable seat. This seat uses air pressure to expand the seat against the disc, providing even pressure distribution for a bubble tight seal. The seat makes only casual contact with the disc during opening and closing, eliminating the wear caused by impingement style valves. Substantially less torque is required to open and close the Posi-flate valve compared to other high temperature valves, resulting in a more compact size and lower overall cost.

The Posi-flate Series 470 valve features a liquid cooled disc and flanges to keep the elastomer seat cool. Together the flanges and the disc fully encapsulate the seat in the closed position protecting it from the hot material. The application will determine which of these components need to be cooled. The cooling fluid is directed through the housing to the disc, flows around the disc edge and comes out the other end. The flanges have internal cooling passages with their own individual cooling ports.

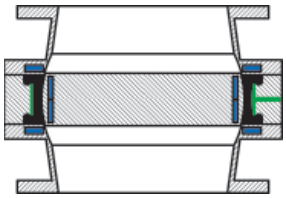
Standard sizes range from 2" to 16". The valve materials can be customized to give the best value and performance for an application.

## How it works

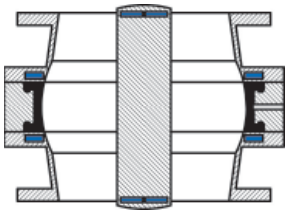
Cooling fluid flows through passages in the disc and flanges adjacent to the seat. This keeps the seat cool and prevents degradation of the elastomer.



***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.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