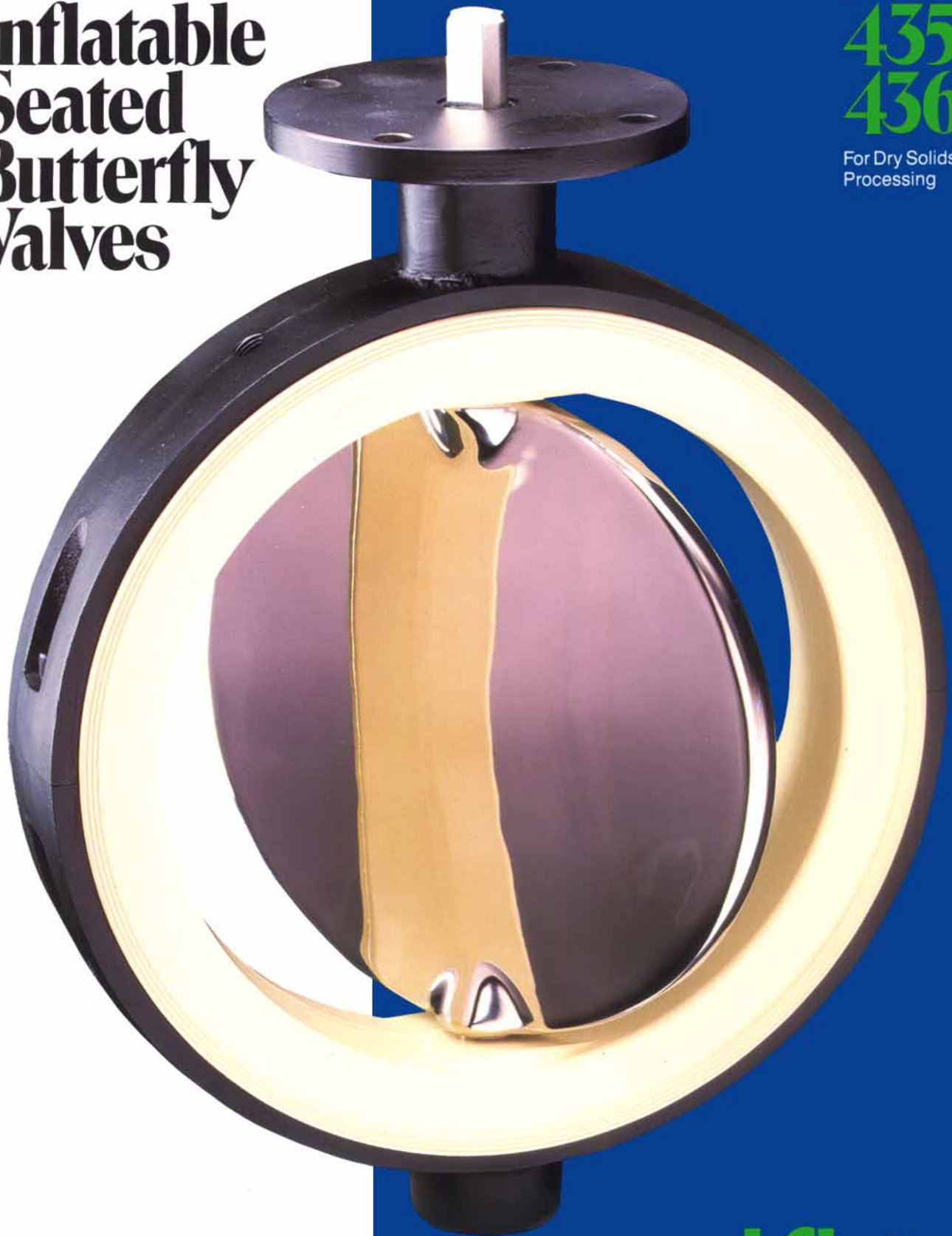


# Inflatable Seated Butterfly Valves



SERIES  
**435**  
**436**

For Dry Solids  
Processing

**posi-flate<sup>®</sup>**  
butterfly valves



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

Posi-plate's new butterfly valve with an inflatable seat is a dramatic breakthrough over conventional butterfly valves for dry solids processing.

The seat design is the secret to longer life in two critical ways. It has only casual contact with the disc during valve opening and closing. It automatically compensates for wear when it inflates against the disc. Both features substantially prolong valve life.

*In actual comparison tests the Posi-plate® butterfly valve out performed all other valves tested.*

The unique design also provides a superior seal. By utilizing air pressure to expand the seat against the disc, it provides maximum sealing area and an even pressure distribution against the disc—every time.

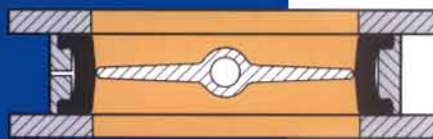
For fail-safe monitoring, a pressure switch can be utilized to verify a positive seal.

*The new Posi-plate valve comes in standard sizes from 4" to 16". Meets AWWA torque requirements.*

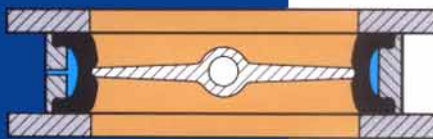
## Performance Features

- 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 build-up
- Double shaft seals
- Triple bearings
- Fail-safe monitoring

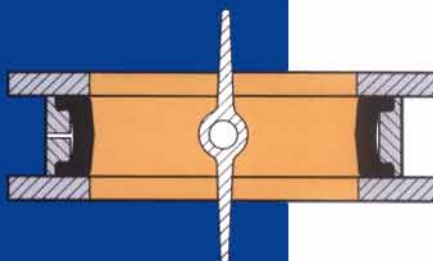
## How it works



*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.*

## SERIES 435

## SERIES 436

### Design features for easy maintenance

**A. CAST FLANGE**—Flanges are designed for easy actuator mounting and interchangeability between various valve sizes.

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

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

**D. SHAFT SEALS**—Double U-cup shaft seals with backup ring insures positive sealing under the most adverse conditions.

**E. AIR INLET PORT**—Over-sized inlet port allows quick valve pressurization/ depressurization.

**F. DISC/SHAFT**—Integral stainless steel disc and shaft with smooth, contoured surfaces provides minimum resistance to flow and reduces material build-up.

**G. SHAFT**—Corrosion-resistant, high-strength steel shaft can be easily replaced.

**H. DISC**—Smooth contoured surface assures extended seat life and disc can be easily replaced.

**I. DISC SCREWS**—Recessed self-locking screws minimize flow restrictions and material build-up, and allow shaft to be disassembled from disc.

**J. HOUSING GASKET**—Assures leakproof housing.

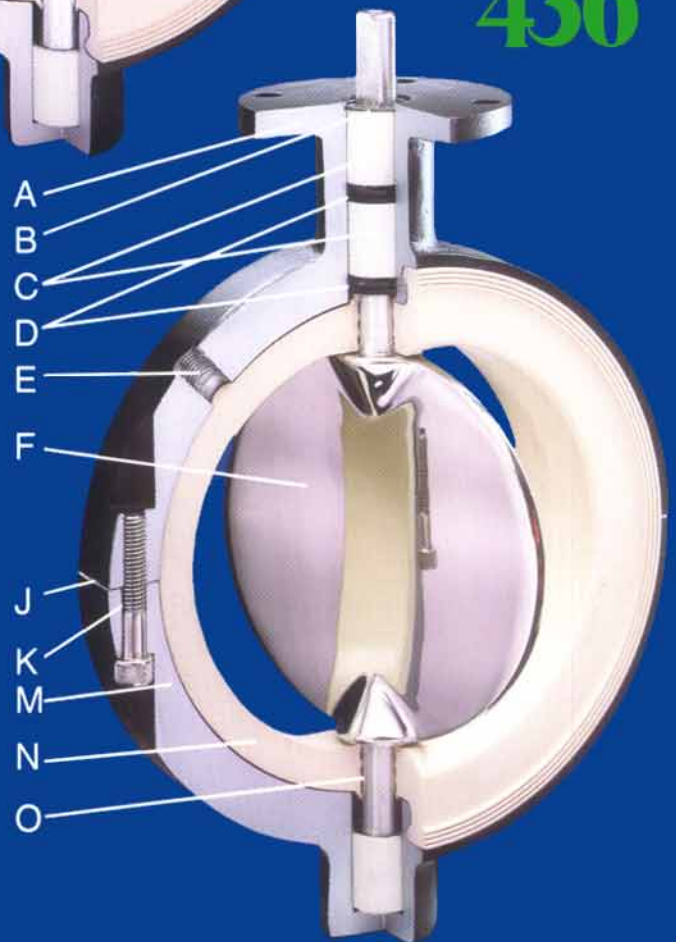
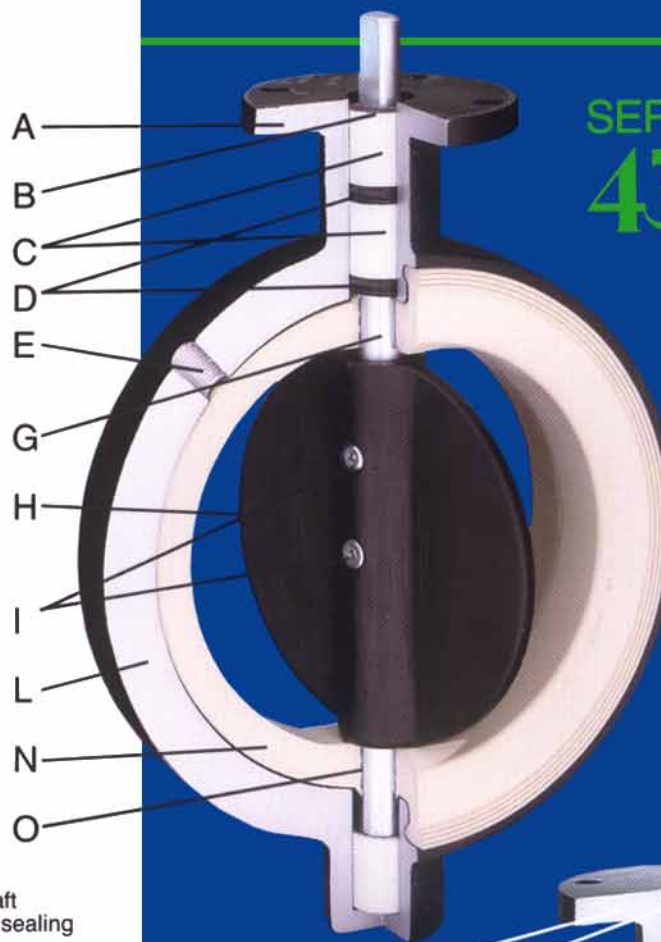
**K. HOUSING BOLTS**—Quality Grade 8 high strength.

**L. HOUSING**—Rugged one-piece cast body fits between standard 125/150 class ANSI flanges.

**M. SPLIT HOUSING**—Rugged cast body fits between standard 125/150 class ANSI flanges. Minimizes assembly time and allows for integral shaft and disc.

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

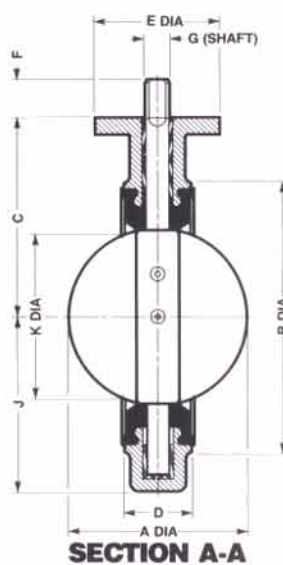
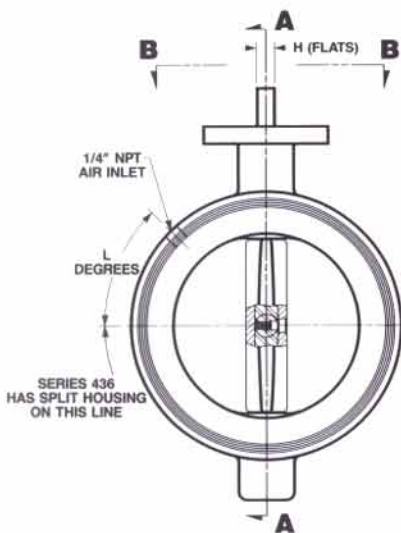
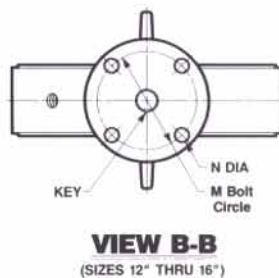
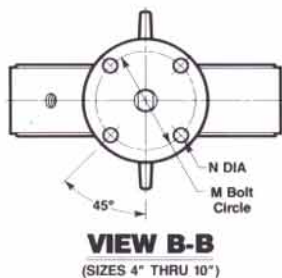
**O. MATERIAL SEAL**—Uses combination lip and land seals to provide a static pressure seal and inflatable pressure against disc shaft for dynamic seal.



**posi-flate<sup>®</sup>**  
butterfly valves

- K is the minimum allowable pipe or flange inside diameter.
- Minimum pressure differential of 15 PSIG must be maintained between the pressure applied to the seat and the working pressure of the valve.

Valve Size	Posi-Flate Series 435-436 Dimensions (Inches)														Weight (Pounds)	Torque Inch Pounds	
	A	B	C	D	E	F	G	H	J	K	L	M	N	Key		Min.	Max.
4	3.860	6.876	6.000	2.000	4.000	1.250	.625	.438	4.800	3.426	45	3.250	.438	None	13	130	450
6	5.850	8.750	6.500	2.125	4.000	1.250	.625	.438	5.700	5.575	45	3.250	.438	None	17	300	450
8	7.800	10.875	8.313	2.500	6.000	1.250	.750	.500	7.000	7.513	45	5.000	.563	None	30	540	700
10	9.810	13.313	9.000	2.500	6.000	1.250	.875	.625	7.800	9.611	60	5.000	.563	None	44	860	1300
12	11.830	16.060	10.281	3.000	6.000	2.000	1.125	None	9.000	11.568	60	5.000	.563	.25 sq	75	1240	2480
14	13.080	17.750	12.000	3.000	6.000	3.000	1.375	None	10.050	12.685	60	5.000	.563	.313 sq	130	1510	3020
16	15.020	20.125	12.953	4.000	6.000	3.000	1.625	None	11.100	14.603	45	5.000	.563	.375 sq	170	2010	4020



**Temperature limits:** vary with materials of construction.  
**Air supply:** 115 PSIG maximum to seat  
**Working pressure:** 100 PSIG maximum

## SERIES 435

Single-housing design with disc and shaft.

## SERIES 436

Split-housing design with integral disc and shaft.

### Available Materials of Construction

**Housing:** Ductile iron.

**Resilient Seat:** Polyurethane, Buna-N and FDA.

**Disc:** Cast ductile iron, cast 316 stainless steel (satin finish or polished finish).

**Disc Screws:** Zinc-plated carbon steel, stainless steel.

**Bearings:** Nylon, bronze.

**Seal Insert:** Nylon.

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

**Shaft Seal:** Buna-N.

**Housing Gasket:** Buna-N (Series 436).

**Retaining Ring:** Carbon steel.

**Housing Bolts:** Carbon steel.

All specifications subject to change without notice.

Available customized in a wide assortment of other materials.

Foreign Patents Pending

Posi-flate® is a registered trademark of Posi-flate, St. Paul, Minnesota.

**posi-flate®**  
butterfly valves

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