

# Resilient Seated Butterfly Valves



 A GFT COMPANY

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## Figures 101/108/102



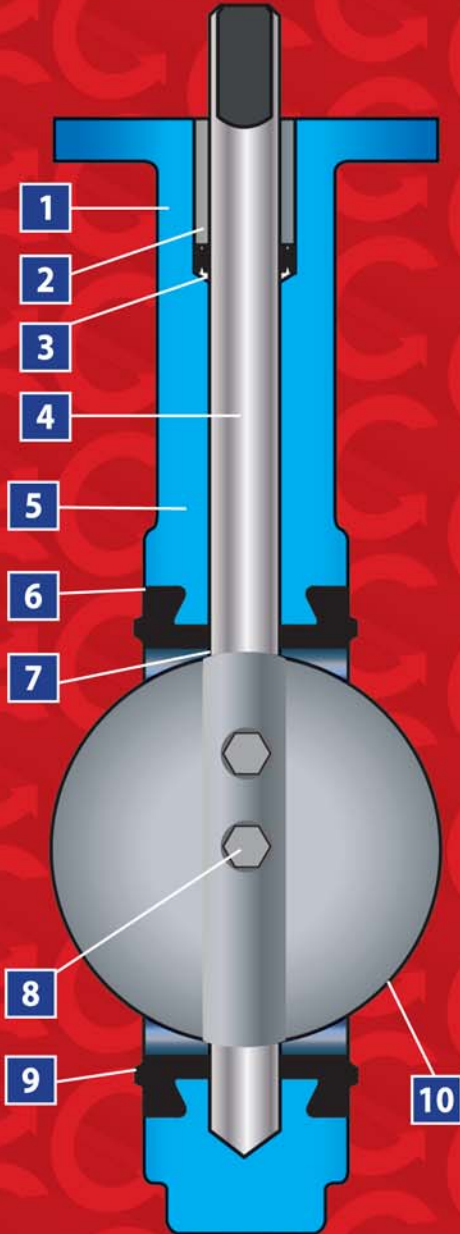
Sizes  
2" - 12"  
Rated Up To 175 PSI

**ABZ VALVES & CONTROLS**  
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# ABZ Precision Built Butterfly Valves

Resil-O-Seat™ Seated Valves for Chemical and Abrasion Resistance Applications.

The figures 101/102/108 provide excellent flexibility with a variety of trim materials. These are available for a wide selection of applications.



**1** Body machined to high tolerances. Guaranteed standard dimensions for interchangeability of parts and actuators.

**2** Top bushings protect the stem from side thrust of operators. They are made of impact and corrosion resistant materials.

**3** Special double-V-shape of stem seal self-adjusts to protect the stem area for either vacuum or pressure use.



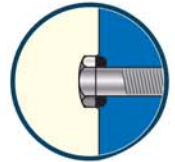
**4** Stem extends through disc and aligns with socket in body. Stem end has standard dimensions for operator interchangeability.

**5** Long neck allows for insulation requirements.

**6** The special snap-in Resil-O-Seat™ design fixes seat in place without bonding. The Resil-O-Seat™ is 100% field replaceable - no special tools required.



**7** Stem and body are isolated from the line media by the interference fit of the primary seal created between the disc and seat.



**8** Stainless steel cap screws securely hold disc to stem. O-ring seal prevents leakage into the stem area and creates a positive connection.

**9** Resil-O-Seat™ forms a seal against all standard ANSI 125/150 flanges. Gasketing requirements are eliminated.

**10** Disc edge is individually processed through machining and hand buffing for a smooth edge, providing a bubble tight shutoff and maximum seat life.

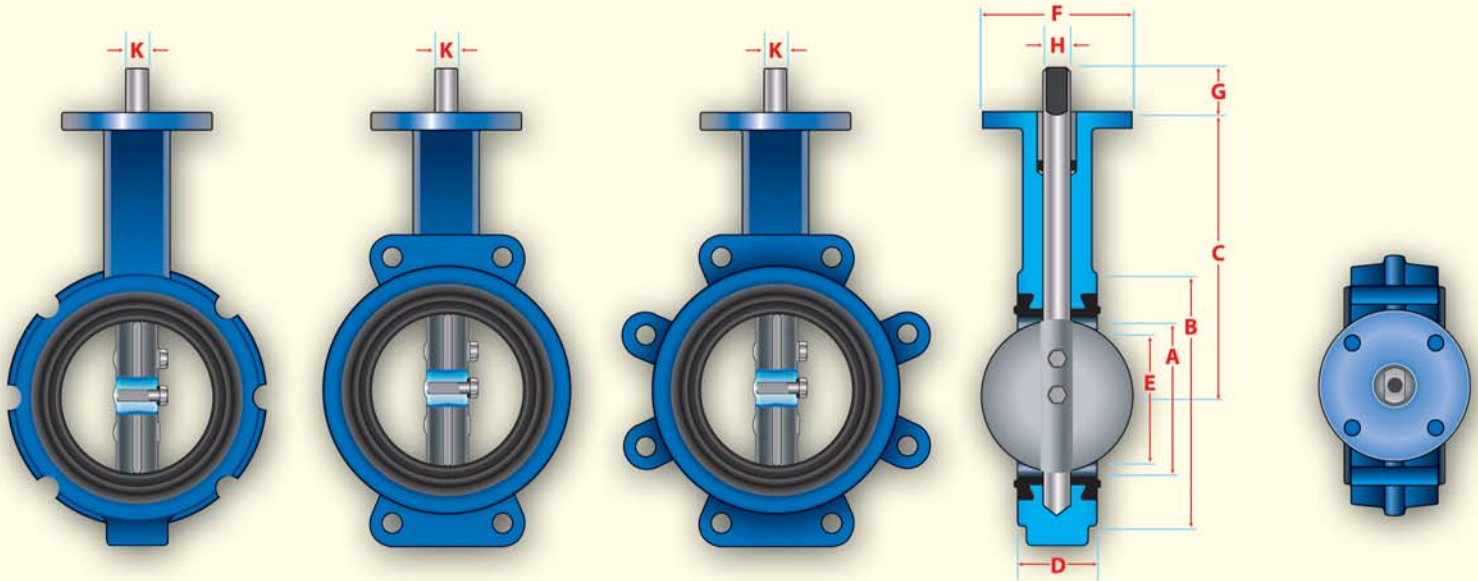
**101** is a wafer style body  
**108** is semi-lug style body  
**102** is a full lug style body



## FIGURES 101/108/102



# Valve Dimensions



All standard seats are Food Grade with the exception of Viton

Valve Size	DIMENSIONS									TOP PLATE DRILLING			TAPPED LUG DATA			WEIGHT (POUNDS)			
	A	B	C	D	E	F	G	H	K	Bolt Circle	No. Holes	Hole Dia.	Bolt Circle	No. Holes 102	No. Holes 108	Tap	101	108	102
2	2 <sup>1/8</sup>	4 <sup>1/8</sup>	5 <sup>1/2</sup>	1 <sup>5/8</sup>	1 <sup>11/16</sup>	4	1 <sup>1/4</sup>	9/16	3/8	3 <sup>1/4</sup>	4	7/16	4 <sup>3/4</sup>	4	4	5/8-11 UNC	7	8	8
2 <sup>1/2</sup>	2 <sup>9/16</sup>	4 <sup>7/8</sup>	6	1 <sup>3/4</sup>	2 <sup>3/16</sup>	4	1 <sup>1/4</sup>	9/16	3/8	3 <sup>1/4</sup>	4	7/16	5 <sup>1/2</sup>	4	4	5/8-11 UNC	8	9	9
3	3 <sup>1/8</sup>	5 <sup>3/8</sup>	6 <sup>1/4</sup>	1 <sup>3/4</sup>	2 <sup>7/8</sup>	4	1 <sup>1/4</sup>	9/16	3/8	3 <sup>1/4</sup>	4	7/16	6	4	4	5/8-11 UNC	9	10	10
4	4 <sup>1/8</sup>	6 <sup>7/8</sup>	7	2	3 <sup>7/8</sup>	4	1 <sup>1/4</sup>	5/8	7/16	3 <sup>1/4</sup>	4	7/16	7 <sup>1/2</sup>	8	4	5/8-11 UNC	13	17	20
5	5 <sup>3/16</sup>	7 <sup>5/8</sup>	7 <sup>1/2</sup>	2 <sup>1/8</sup>	5	4	1 <sup>1/4</sup>	5/8	7/16	3 <sup>1/4</sup>	4	7/16	8 <sup>1/2</sup>	8	4	3/4-10 UNC	19	20	23
6	6 <sup>1/8</sup>	8 <sup>3/4</sup>	8	2 <sup>1/8</sup>	6	4	1 <sup>1/4</sup>	5/8	7/16	3 <sup>1/4</sup>	4	7/16	9 <sup>1/2</sup>	8	4	3/4-10 UNC	20	24	27
8	8 <sup>1/8</sup>	11	9 <sup>1/2</sup>	2 <sup>1/2</sup>	8	6	1 <sup>1/4</sup>	3/4	1/2	5	4	9/16	11 <sup>3/4</sup>	8	4	3/4-10 UNC	36	38	43
10	10 <sup>1/8</sup>	13 <sup>3/8</sup>	10 <sup>3/4</sup>	2 <sup>1/2</sup>	10 <sup>1/16</sup>	6	1 <sup>1/4</sup>	7/8	5/8	5	4	9/16	14 <sup>1/4</sup>	12	4	7/8-9 UNC	49	55	63
12	12 <sup>1/8</sup>	16 <sup>1/8</sup>	12 <sup>1/4</sup>	3	11 <sup>15/16</sup>	6	2	1 <sup>1/8</sup>	1/4	5	4	9/16	17	12	4	7/8-9 UNC	70	82	90

## NOTES:

1. Dimension "K" not applicable to 12" size. The 12" stem is round with 1/4" Key.
2. The figures 101, 102 and 108 cannot be used on pipe or flange with an inside diameter less than the "E" dimension.
3. Valves are rated up to 175 PSI bi-directional service and 85 PSI end of line rating. Undercut disc is rated up to 50 PSI bi-directional service and 25 PSI end of line rating. Preferred direction is with disc bolts on downstream side of disc.
4. Designed in accordance with sections of API 609 Category A, ASME 16.1/16.5, ASME 16.34 and MSS SP67. Design tested in accordance with API 598.
5. Compatible with ANSI Class 125/150 flange standards.

## STANDARD CONSTRUCTION SPECIFICATIONS:

**Body:** Cast Iron, Ductile Iron (Lug) and Aluminum (Wafer)

**Disc:** 316 Stainless Steel, Aluminum Bronze, Ductile Iron, Epoxy Coated Ductile Iron

**Stem:** 316 Stainless Steel, 416 Stainless Steel, Carbon Steel

**Resilient Seat:** EPDM, Buna-N, Viton, Natural Rubber, White Buna, White Neoprene.

**Stem Bushing:** Teflon® – Graphite Impregnated

**Stem Packing:** Buna-N and Viton

Additional materials are available for a wide selection of applications.





### Rated Flow Coefficient (Cv) - Figure 101/108/102

Valve Size	ANGLE OF DISC OPENING								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
2	1.67	7.7	17	29	48	74	115	145	195
2 1/2	2.50	11.0	25	44	69	109	174	237	307
3	3.33	15.7	37	64	105	165	276	377	487
4	5.00	27.7	63	110	177	278	472	671	827
5	8.33	43.7	99	177	276	443	752	1,083	1,325
6	13.33	58.7	136	242	385	616	1,075	1,521	1,883
8	20.00	107.3	247	434	687	1,094	1,821	2,671	3,239
10	31.67	174.0	394	696	1,092	1,770	2,983	4,288	5,210
12	47.0	251.7	578	1,002	1,665	2,654	4,398	6,466	8,026

Cv is defined as the volume of water in U.S.G.P.M. that will flow through a given restriction or valve opening with a pressure drop of one (1) p.s.i. at room temperature. Recommended control angles are between 25°-70° open.

### Torque Chart - Figure 101/108/102

Valve Size	NORMAL CONDITIONS					SEVERE CONDITIONS				
	Δ P=0	Δ P=50	Δ P=100	Δ P=150	Δ P=175	Δ P=0	Δ P=50	Δ P=100	Δ P=150	Δ P=175
2	221	230	240	250	254	373	384	400	406	410
2 1/2	269	283	288	302	311	454	464	475	486	497
3	322	341	365	379	392	540	568	589	611	634
4	480	514	542	576	590	816	848	886	918	936
5	653	706	754	806	854	1,102	1,162	1,220	1,274	1,301
6	907	1,008	1,109	1,210	1,260	1,529	1,642	1,756	1,868	1,926
8	1,512	1,714	1,915	2,112	2,215	2,549	2,776	3,002	3,229	3,343
10	2,318	2,621	2,900	3,224	3,372	3,910	4,250	4,590	4,931	5,101
12	3,125	3,629	4,138	4,637	6,112	5,270	5,838	6,404	6,971	7,258

Undercut disc available.

All torques shown in inch lbs. 20% Safety factor already included.



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