

KEYSTONE

Resilient Seated Butterfly Valves Sizes 2 thru 12-inch to 250 psi Sizes 14 thru 24-inch to 200 psi

Features and Benefits

- Suitable for high pressure and full vacuum service due to the use of a cartridge seat design.
- Triple function cartridge seat isolates the body and stem from the media, provides positive drop-tight shut-off of line media at full rated pressure and provides a flange seal, eliminating the need for flange gaskets.
- Full rated uni-directional dead-end service is achieved by utilizing a unique patented lip in the lug body.
- Strong disc-to-stem connection and elimination of exposed pins or bolts is achieved through the use of a rectangular drive.
- Ability to install the valve with the disc in the closed position eliminates the risk of damage to the valve during installation.
- Maximum flow and rangeability is achieved with the use of a streamlined disc.
- Stems are blow-out proof stems as a standard.
- Longer seat life with low operating torques is ensured by utilizing upper and lower stem bearings.
- Need for costly brackets is eliminated due to the ability to direct mount actuation onto the valve top-plate.

General Application

Ideally suited for many industrial applications such as food and beverage, pulp and paper, chemical, mining, water treatment, power, and automotive where a heavy-duty resilient seated butterfly valve is required. Available in a wide variety of body, disc and seat materials to fit a wide variety of media applications.



Technical Data

Size Range:

2 thru 24-inch wafer and lug styles

Pressure Rating:

2 thru 12-inch – 250 psi
14 thru 24-inch – 200 psi

Teflon® seat or elastomer covered disc
2 thru 12-inch – 150 psi

Flange Standard: ANSI Class 125/150

Designed to comply with MSS-SP-67 and API 609*

*May be shell tested to spec on request.

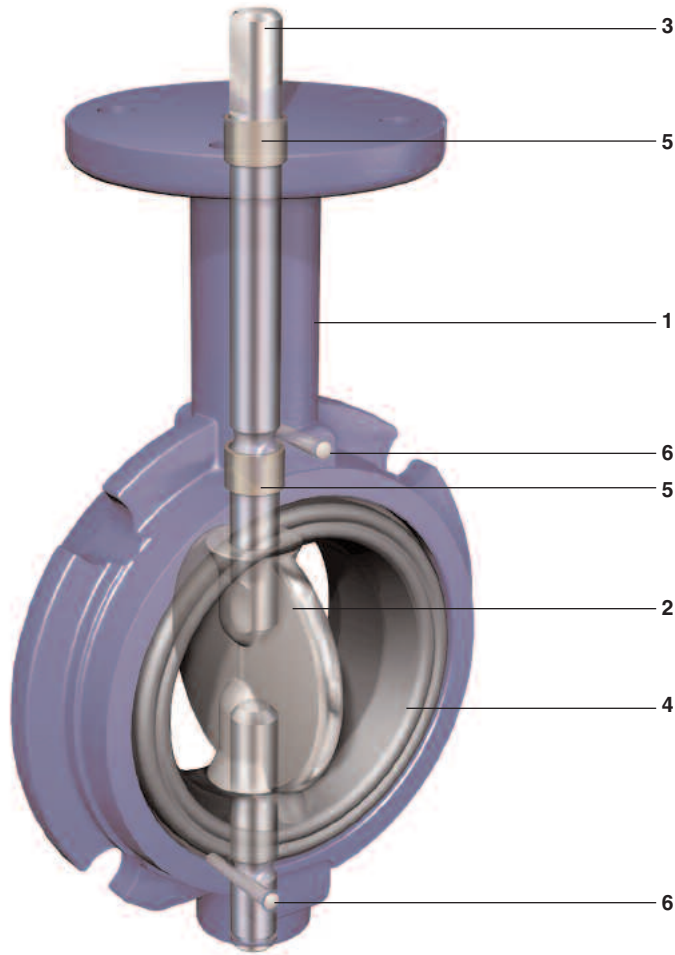
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tyco / Flow Control

Total Flow Control Solutions™

Specifications



Materials

Part	Standard Material	Material Specifications
1. Body	Cast Iron Ductile Iron Bronze* 316 Stainless Steel*	ASTM A-126, Class B ASTM A-395 Gr. 60/40/18 ASTM B-148 C95400 ASTM A-351 CF8M
2. Disc	Ductile Iron/Nickel Plated Aluminum Bronze 316 Stainless Steel EPDM Coated (2 thru 12-inch) NBR Coated (2 thru 12-inch) PVDF Coated	ASTM A-536 Gr. 65/45/12 ASTM B-148, C95400 ASTM A-351 CF8M
3. Stem	316 Stainless Steel (2 thru 12-inch) 17-4 Stainless Steel (14 thru 24-inch)	ASTM A-276 ASTM A-564 UNS S17400 Condition H-1075
4. Seat	EPDM (-20°F - 250°F) NBR (0°F - 180°F) White Neoprene (0°F - 180°F) Black Neoprene (0°F - 180°F) Fluoroelastomer (0°F - 300°F) Teflon® (-20°F - 250°F) (2 thru 12-inch)	
5. Bearing**	Teflon® Gar-Fil (2 thru 24-inch)	
6. Pin	Carbon Steel	

* Limited size and body style. These bodies come standard with a vented shaft and food grade seats.

** Valves with 316 SS bodies are provided with two additional bearings in the lower stem journal.

Specifications

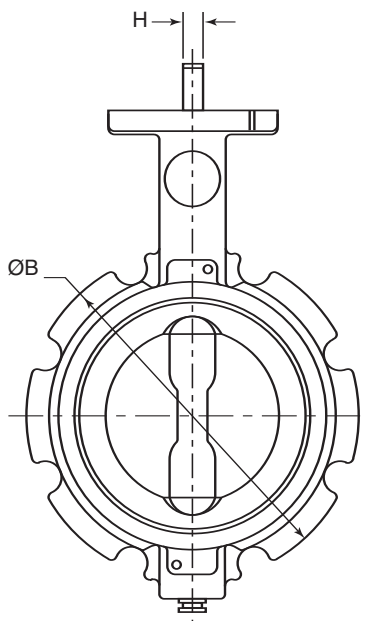
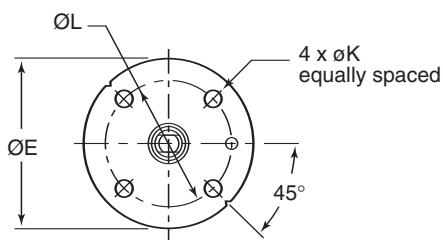
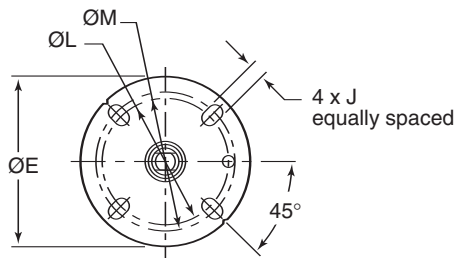


Figure 601 Wafer

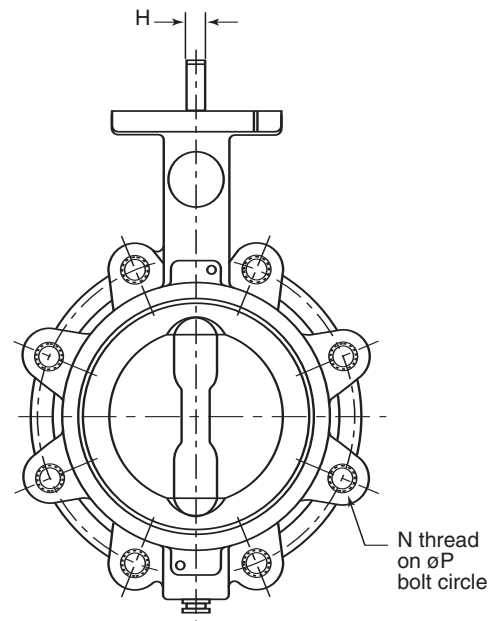
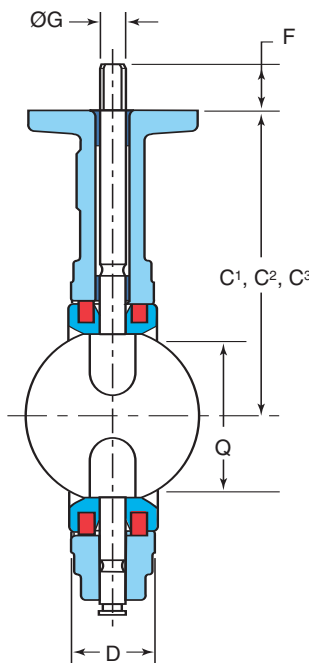


Figure 602 Lugged

Dimensions (inches)

Size	B	C ¹	C ²	C ³	D	E	F	G	H	J	K	L	M	N	P	*Q	Key	Adapt. Code
2"	5.09	5.75	4.69	3.93	1.63	4.00	1.25	0.56	0.37	0.406	-	3.00	3.25	5/8-11	4.75	1.41	-	BAB
2 1/2"	5.81	6.25	N/A	4.50	1.75	4.00	1.25	0.56	0.37	0.406	-	3.00	3.25	5/8-11	5.50	1.82	-	BAB
3"	6.25	6.50	4.87	4.87	1.75	4.00	1.25	0.56	0.37	0.406	-	3.00	3.25	5/8-11	6.00	2.62	-	BAB
4"	7.81	7.25	6.00	6.00	2.00	4.00	1.25	0.62	0.43	0.406	-	3.00	3.25	5/8-11	7.50	3.62	-	BAC
5"	8.75	7.75	N/A	6.00	2.12	4.00	1.25	0.75	0.50	0.406	-	3.00	3.25	3/4-10	8.50	4.67	-	BAD
6"	9.75	8.38	6.50	6.50	2.14	4.00	1.25	0.75	0.50	0.406	-	3.00	3.25	3/4-10	9.50	5.68	-	BAD
8"	12.00	9.62	N/A	8.31	2.35	6.00	1.25	0.87	0.62	-	0.562	5.00	-	3/4-10	11.75	7.54	-	CAE
10"	14.50	11.00	N/A	9.00	2.63	6.00	2.00	1.12	-	-	0.562	5.00	-	7/8-9	14.25	9.65	1/4 x 1/4	CAF
12"	17.50	12.50	N/A	10.28	3.00	6.00	2.00	1.37	-	-	0.562	5.00	-	7/8-9	17.00	11.49	5/16 x 5/16	CAG
14"	19.50	13.25	N/A	N/A	3.06	6.00	2.25	1.50	-	-	0.531	5.00	-	1-8	18.75	12.97	3/8 x 3/8	
16"	22.06	14.75	N/A	N/A	4.01	6.00	2.25	1.50	-	-	0.531	5.00	-	1-8	21.25	14.85	3/8 x 3/8	
18"	23.44	15.75	N/A	N/A	4.48	6.75	3.00	1.75	-	-	0.531	5.00	-	1 1/8-7	22.75	16.76	3/8 x 3/8	
20"	25.68	16.25	N/A	N/A	4.99	6.75	3.00	1.75	-	-	0.531	5.00	-	1 1/8-7	25.00	18.72	3/8 x 3/8	
24"	30.06	19.12	N/A	N/A	6.00	8.00	3.50	2.25	-	-	0.812	6.50	-	1 1/4-7	29.50	22.59	1/2 x 1/2	

C¹ Dimensions apply to Cast Iron and Ductile Iron bodies ONLY.

C² Dimensions apply to Stainless Steel bodies ONLY.

C³ Dimensions apply to Aluminum Bronze bodies ONLY.

*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.

C_v Chart (Water @ 70°F Sp. Gr. 1.00)

Valve Size	Disc Position (Degrees Open)							
	25°	30°	40°	50°	60°	70°	80°	90°
2"	3	7	19	36	63	84	115	120
2 1/2"	4	10	24	47	78	113	182	194
3"	14	21	45	84	133	203	382	430
4"	30	52	100	165	270	420	703	830
5"	85	130	210	345	525	825	1,350	1,500
6"	165	225	360	570	820	1,260	1,875	1,980
8"	210	300	480	780	1,320	2,280	3,780	3,870
10"	405	575	850	1,200	1,900	3,300	6,100	6,450
12"	550	750	1,200	1,875	2,850	5,025	9,300	9,800
14"	650	825	1,500	2,300	3,500	6,200	9,700	10,500
16"	800	1,000	1,850	2,900	4,600	7,500	10,600	13,500
18"	1,100	1,400	2,450	3,800	5,000	9,700	13,850	18,000
20"	1,400	1,650	3,050	4,800	7,400	12,500	17,750	23,000
24"	2,000	2,400	4,200	6,600	10,500	17,000	23,000	31,000

Note

C_v is the valve flow capacity expressed as the flow rate of 60°F water, in US gallons per minute, which produces a 1 psi pressure drop across the valve.

Tyco Valves & Controls

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