



Wafer and Lug style resilient seated butterfly valves with molded-in seat design.

Features and Benefits

- Molded-in resilient seat provides bubble-tight shutoff to 250 psi.
- Offered in two body styles: wafer and lug. The lugged body is drilled and tapped for isolation and removal of downstream piping at full rated pressure.
- Round, polished disc and hub edge provides 360 degree concentric seating, minimum flow restriction, lower torques and longer seat life.
- Upper and lower inboard bronze bearings ensure longer service life with low operating torques.
- Thru-stem design provides high strength and positive disc control with standardized end connection for operator interchangeability.
- Extended neck allows adequate clearance for flanges and insulation.
- Bi-directional, self-adjusting stem seal, located in the upper journal, is suitable for vacuum and pressure while also preventing external contamination of the stem area.
- Heavy-duty corrosion resistant top bushing, located in the upper journal, absorbs actuator side thrust.
- Cast-in top plate is an integral part of the body and is standardized to allow direct mounting of actuators.
- Each valve is factory tested to 110° of specified pressure rating.



General Application

Heating, ventilation, air conditioning and irrigation markets.

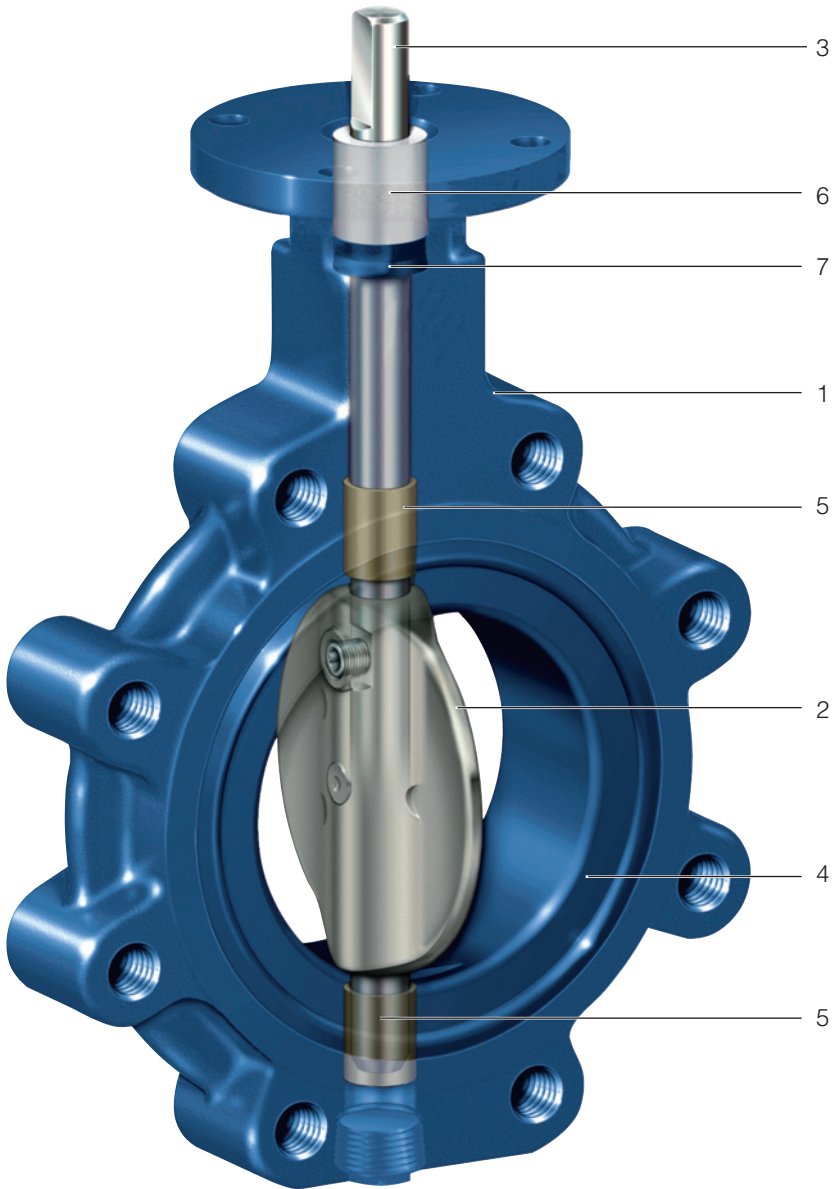
Technical Data

Size Range:	2" to 12" wafer and lug styles
Pressure Rating:	250 psi
Bi-directional	
Dead End Rating:	250 psi
Temperature Rating:	-40°F to +250°F
Flange Accommodation:	ASME 125/150

Grinnell Series 1000

Resilient Seated Butterfly Valves, 2" to 12"

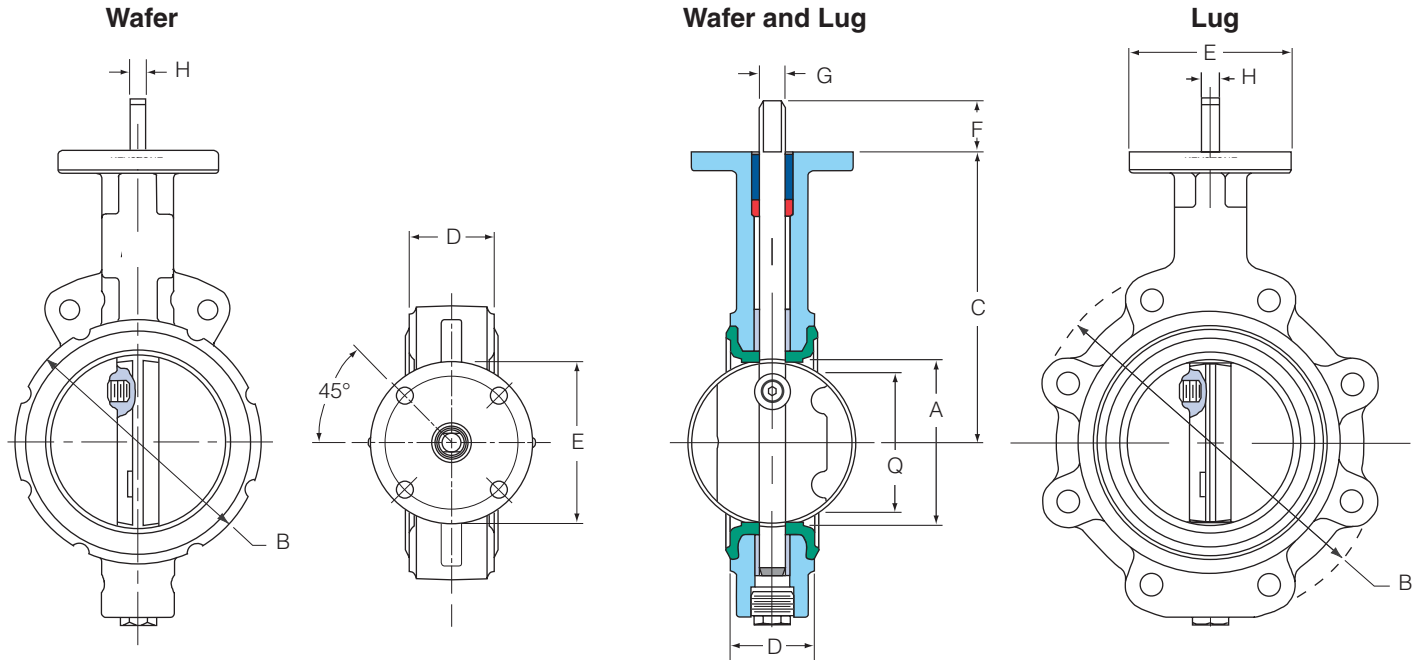
Materials



Materials

No.	Description	Material	Material Standards
1	Body	Cast Iron	ASTM A126 Class B
2	Disc	304 SS	ASTM A351 Grade CF8
3	Stem	416 SS	ASTM A582 UNS S41600
4	Molded-in liner	EPDM NBR	
5	Inboard bearings	Bronze	
6	Upper bushing	Polyester	
7	Upper stem seal	NBR	

Dimensions (inches)



Wafer Dimensions (inches)

Size	A	B	C	D	Q	E	F	G	H	Top Plate Drilling			Weight (lbs.)	
										Key	Bolt Circle	No. Holes		Hole Diam.
2	2 ¹ / ₁₆	4 ¹ / ₈	5 ⁵ / ₁₆	1 ¹¹ / ₁₆	1 ³ / ₈	4	1 ¹ / ₄	9 ¹ / ₁₆	3 ³ / ₈	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	7.7
2 ¹ / ₂	2 ⁹ / ₁₆	4 ⁵ / ₈	5 ¹⁵ / ₁₆	1 ¹³ / ₁₆	2	4	1 ¹ / ₄	9 ¹ / ₁₆	3 ³ / ₈	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	8.8
3	3 ¹ / ₁₆	5 ³ / ₁₆	6 ⁵ / ₁₆	1 ¹³ / ₁₆	2 ⁵ / ₈	4	1 ¹ / ₄	9 ¹ / ₁₆	3 ³ / ₈	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	10.2
4	4 ¹ / ₁₆	6 ³ / ₈	7 ¹ / ₈	2 ¹ / ₁₆	3 ¹¹ / ₁₆	4	1 ¹ / ₄	5 ³ / ₈	7 ¹ / ₁₆	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	16.9
5	5 ¹ / ₁₆	7 ³ / ₈	7 ¹¹ / ₁₆	2 ¹ / ₄	4 ³ / ₄	4	1 ¹ / ₄	3 ³ / ₄	1 ¹ / ₂	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	19.9
6	5 ¹³ / ₁₆	8 ¹ / ₂	8 ⁵ / ₁₆	2 ¹ / ₄	5 ⁹ / ₁₆	4	1 ¹ / ₄	3 ³ / ₄	1 ¹ / ₂	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	25.3
8	7 ¹³ / ₁₆	10 ¹¹ / ₁₆	9 ¹ / ₂	2 ³ / ₈	7 ³ / ₄	6	1 ¹ / ₄	7 ⁷ / ₈	5 ³ / ₈	N/A	5	4	9 ¹ / ₁₆	40.5
10	9 ¹³ / ₁₆	13	10 ⁷ / ₈	2 ¹¹ / ₁₆	9 ³ / ₄	6	2	1 ¹ / ₈	N/A	1 ¹ / ₄ x 1 ¹ / ₄	5	4	9 ¹ / ₁₆	61.1
12	11 ¹³ / ₁₆	14 ¹³ / ₁₆	12 ¹ / ₄	3 ¹ / ₈	11 ³ / ₄	6	2	1 ¹ / ₈	N/A	1 ¹ / ₄ x 1 ¹ / ₄	5	4	9 ¹ / ₁₆	82.7

Lug Dimensions (inches)

Size	A	B	C	D	Q	E	F	G	H	Top Plate Drilling			Tapped Lug Data			Weight (lbs.)	
										Key	Bolt Circle	No. Holes	Hole Diam.	Bolt Circle	No. Holes		Tap
2	2 ¹ / ₁₆	4 ³ / ₄	5 ⁵ / ₁₆	1 ¹¹ / ₁₆	1 ³ / ₈	4	1 ¹ / ₄	9 ¹ / ₁₆	3 ³ / ₈	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	4 ³ / ₄	4	5 ⁸ / ₁₆ -11 UNC-2B	9.0
2 ¹ / ₂	2 ⁹ / ₁₆	5 ¹ / ₄	5 ¹⁵ / ₁₆	1 ¹³ / ₁₆	2	4	1 ¹ / ₄	9 ¹ / ₁₆	3 ³ / ₈	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	5 ¹ / ₂	4	5 ⁸ / ₁₆ -11 UNC-2B	10.5
3	3 ¹ / ₁₆	5 ³ / ₁₆	6 ⁵ / ₁₆	1 ¹³ / ₁₆	2 ⁵ / ₈	4	1 ¹ / ₄	9 ¹ / ₁₆	3 ³ / ₈	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	6	4	5 ⁸ / ₁₆ -11 UNC-2B	11.9
4	4 ¹ / ₁₆	7	7 ¹ / ₈	2 ¹ / ₁₆	3 ¹¹ / ₁₆	4	1 ¹ / ₄	5 ³ / ₈	7 ¹ / ₁₆	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	7 ¹ / ₂	8	5 ⁸ / ₁₆ -11 UNC-2B	21.4
5	5 ¹ / ₁₆	8 ¹ / ₈	7 ¹¹ / ₁₆	2 ¹ / ₄	4 ³ / ₄	4	1 ¹ / ₄	3 ³ / ₄	1 ¹ / ₂	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	8 ¹ / ₂	8	3 ⁴ / ₁₆ -10 UNC-2B	25.7
6	5 ¹³ / ₁₆	9 ¹ / ₄	8 ⁵ / ₁₆	2 ¹ / ₄	5 ⁹ / ₁₆	4	1 ¹ / ₄	3 ³ / ₄	1 ¹ / ₂	N/A	3 ¹ / ₄	4	7 ¹ / ₁₆	9 ¹ / ₂	8	3 ⁴ / ₁₆ -10 UNC-2B	31.0
8	7 ¹³ / ₁₆	11 ⁷ / ₁₆	9 ¹ / ₂	2 ³ / ₈	7 ³ / ₄	6	1 ¹ / ₄	7 ⁷ / ₈	5 ³ / ₈	N/A	5	4	9 ¹ / ₁₆	11 ³ / ₄	8	3 ⁴ / ₁₆ -10 UNC-2B	48.0
10	9 ¹³ / ₁₆	13 ⁷ / ₈	10 ⁷ / ₈	2 ¹¹ / ₁₆	9 ³ / ₄	6	2	1 ¹ / ₈	N/A	1 ¹ / ₄ x 1 ¹ / ₄	5	4	9 ¹ / ₁₆	14 ¹ / ₄	12	7 ⁸ / ₁₆ -9 UNC-2B	75.8
12	11 ¹³ / ₁₆	15 ¹¹ / ₁₆	12 ¹ / ₄	3 ¹ / ₈	11 ³ / ₄	6	2	1 ¹ / ₈	N/A	1 ¹ / ₄ x 1 ¹ / ₄	5	4	9 ¹ / ₁₆	17	12	7 ⁸ / ₁₆ -9 UNC-2B	106.5

Note: "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.

Grinnell Series 1000

Resilient Seated Butterfly Valves, 2" to 12"

Valve C_v

Size, in. [mm]	10°	20°	30°	40°	50°	60°	70°	80°	90°
2 [50]	0	1.3	5	14	26	40	52	59	60
2½ [65]	0	1.4	6	21	44	74	107	138	150
3 [80]	0	1.5	8	29	67	115	175	234	262
4 [100]	1	15	48	107	196	318	463	589	647
5 [125]	3	32	99	206	362	579	832	1,045	1,141
6 [150]	4	47	145	295	510	810	1,160	1,450	1,580
8 [200]	6	84	239	450	751	1,190	1,754	2,385	2,892
10 [250]	9	133	360	652	1,064	1,683	2,524	3,596	4,593
12 [300]	12	192	509	899	1,449	2,288	3,470	5,085	6,682

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.

How to Order

Example

8 - W C - 1 2 9 2 - 3

Valve Size	Body Style	Body Material	Series	Seat Material	Disc Material	Operator	Stem Material
2	W- Wafer	C - Cast Iron	1 - 1000	1 - NBR (std)	9 - 304 SS	0 - None	3 - 416 SS
2.5	L- Lug			2 - EPDM		1 - 10-P Lever	
3						2 - Gear	
4							
5							
6							
8							
10							
12							



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