

Evans SB & DB Series 3-Piece Butterfly Valves



SB Series (Stainless)

- 2"- 4" Sizes
- PTFE Seat with stainless disc & stem
- Optional CFOS Cleaning and Bagging
- 3-pc Wafer style with Presslok® or Tube Extensions
- Optional Purge Ports or Purge Valve
- Helium leak tested to 1×10^{-7} scc/sec
- Reduced installation cost

DB Series (Epoxy Coated Ductile Iron)

- 2"- 4" Sizes
 - EPDM Seat with stainless disc & stem
 - 3-pc Full-Lug with Presslok®, Tube or Pipe Extensions
 - Helium leak tested to 1×10^{-7} scc/sec
 - Reduced installation cost
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- **SB/DB Series Integrated Tee Valves or Manifolds available upon request**

SB-DB Series Butterfly Valve

Body

Three piece valves are assembled using wafer (SB Series) and tapped lug (DB Series). Standard long neck body provides full clearance for insulation on ANSI flanges

Stems

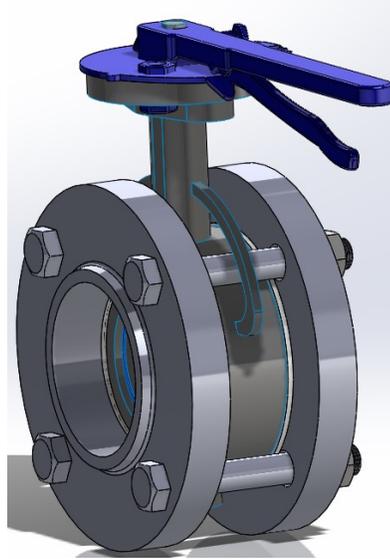
Heavy duty, two-piece design allows for easy maintenance.

Bearings

Two bronze or Teflon bearings are standard

Stem/Disc Attachment

Rectangular drive ensures proper disc connection. No pins or bolts exposed to flow



Seat

PTFE seat (SB Series). EPDM molded – in seat design (DB Series)

Disc

Streamlined for maximum flow and minimum seat wear. Ease of maintenance due to elimination of bolts, pins, etc., as disc to stem connectors

Pressure/Temperature

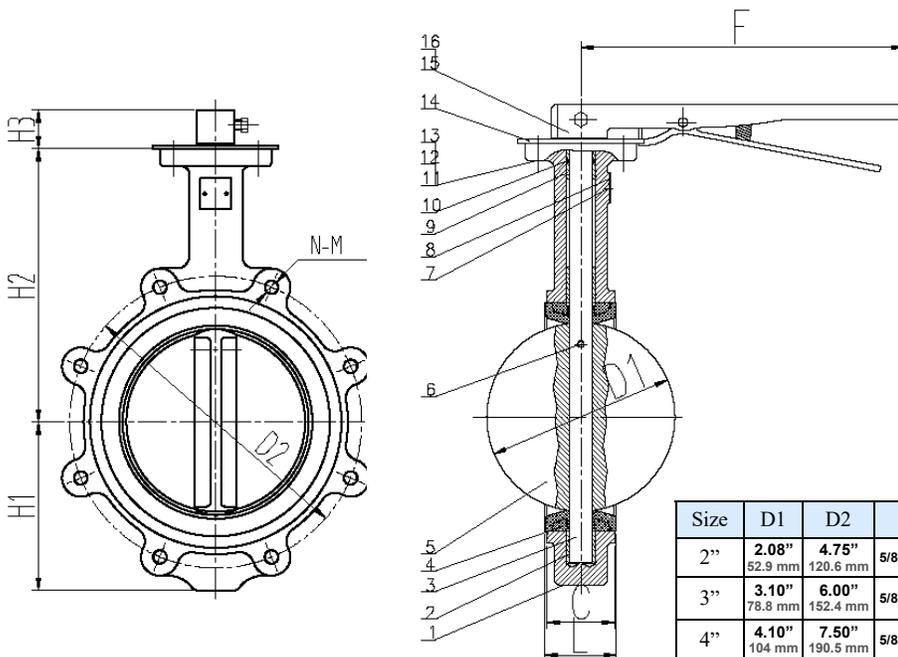
SB/DB Series is rated for full vacuum to 250 psig (14 bar) at 250F (123C),

Dead-End Service

DB Series full lug design feature allows valve to be used in dead end applications at full rated pressure without the use of downstream flange

DB Series Butterfly Valve

The **DB series** lug style resilient seated butterfly valve with molded in seat design. Round polished disc and hub edge provides 360 degree concentric seating, minimum flow restriction, lower torques and longer seat life. Evans 3-pc Butterfly valves eliminate unnecessary costs associated with field assembly, testing and qualification of high performance butterfly valves. Each valve is helium leak tested to 1 X 10⁻⁷ scc/sec.

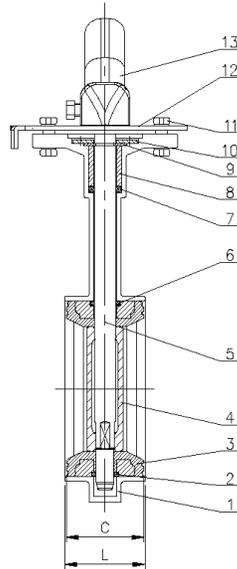
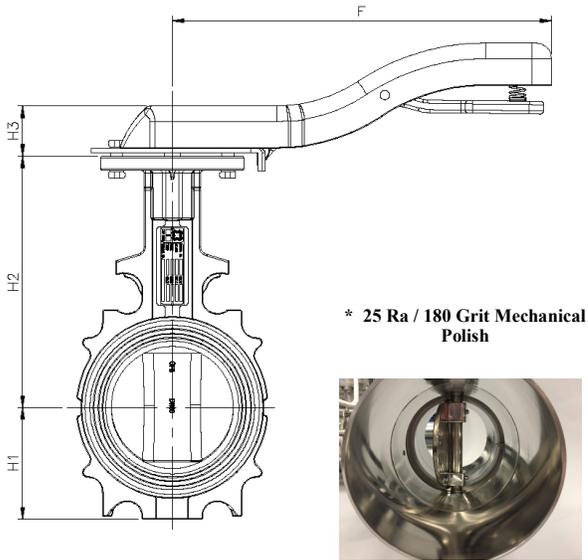


Item	Description	Material
1	Body	ASTM A395 60-40-18
2	Bushing	PTFE
3	Shaft	ASTM A276 410
4	Seat	EPDM
5	Disc	ASTM A351 CF8
6	Cone Pin	316 SS
7	Rivet	AI
8	Label	S.S.
9	Bushing	PTFE
10	O-Ring	EPDM
11	Bolt	ASTM A193 B7
12	Spring Washer	ASTM A29 1566
13	Nut	ASTM A194 2H
14	Notch Plate	C.S.
15	Key	ASTM A29 1045
16	Lever	Parts

Size	D1	D2	M	N	H1	H2	H3	F	C	L
2"	2.08" 52.9 mm	4.75" 120.6 mm	5/8"-11UNC-2B	4	3.15" 80 mm	6.34" 161 mm	1.26" 32 mm	10.51" 267 mm	1.69" 43 mm	1.81" 46 mm
3"	3.10" 78.8 mm	6.00" 152.4 mm	5/8"-11UNC-2B	4	3.74" 95 mm	7.13" 181 mm	1.26" 32 mm	10.51" 267 mm	1.81" 46 mm	1.93" 49 mm
4"	4.10" 104 mm	7.50" 190.5 mm	5/8"-11UNC-2B	8	4.49" 114 mm	7.87" 200 mm	1.26" 32 mm	10.51" 267 mm	2.05" 52 mm	2.17" 55 mm

SB Series Butterfly Valve

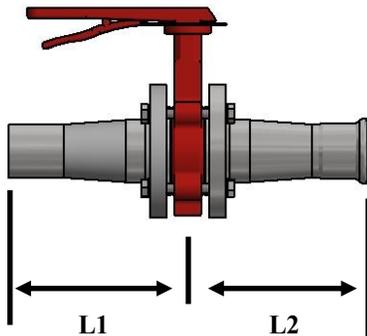
The **SB series** wafer style butterfly valve is designed to meet both the High-tech Industry's needs for a cost effective, high quality valve for CDA, N₂, Vacuum and other inert gas applications. The SB Series stainless butterfly valves can be offered CFOS (cleaned for oxygen service) cleaned then single bagged for protection. Evans Butterfly valves eliminate unnecessary costs associated with field assembly, testing and qualification of high performance butterfly valves. 100% of the valves are helium leak tested to 1 X 10⁻⁷ scc/sec.



Item	Description	Material
1	Body	CF8/CF8M
2	O-Ring	EPDM
3	Seat	PTFE
4	Disc	CF8/CF8M
5	Stem	SUS 304/SUS 316
6	O-Ring	EPDM
7	O-Ring	EPDM
8	Bushing	PTFE
9	Space Collar	ASTM A240-410
10	Retainer	ASTM A240-410
11	Bolt	ASTM A193 BB
12	Notch Plate	ASTM A240-304
13	Lever	ASTM A351 CF8

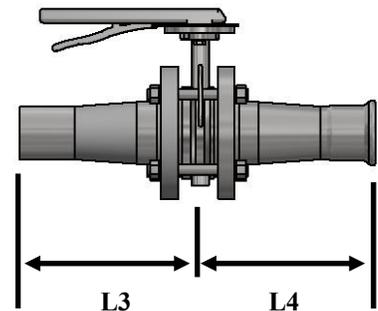
Size	H1	H2	H3	C	L	F
2"	2.24" 57 mm	5.53" 140.5 mm	1.18" 30 mm	1.67" 42.5 mm	1.81" 46 mm	9.49" 241 mm
3"	2.80" 71 mm	6.30" 160 mm	1.18" 30 mm	1.79" 45.5 mm	1.93" 49 mm	9.49" 241 mm
4"	3.41" 86.5 mm	6.93" 176 mm	1.18" 30 mm	2.03" 51.5 mm	2.17" 55 mm	9.49" 241 mm

DB Series Lug Style Valve



Size	L1	L2	L3	L4
2"	8.22" 208.8 mm	8.22" 208.8 mm	8.22" 208.8 mm	8.22" 208.8 mm
3"	10.10" 256.5 mm	10.10" 256.5 mm	10.10" 256.5 mm	10.10" 256.5 mm
4"	12.15" 308.6 mm	12.15" 308.6 mm	12.15" 308.6 mm	12.15" 308.6 mm

SB Series Wafer Style Valve



Valve Series	Design Pressure	Design Temperature	Helium Leak Rate	Class
DB	150 psig (10.34 bar)	250°F (121°C)	1 x 10 ⁻⁷ scc/sec	150
SB	150 psig (10.34 bar)	330°F (165°C)	1 x 10 ⁻⁷ scc/sec	150

Evans Butterfly Valves

PART NUMBERING / ORDER INFORMATION

SB - 128 - - STR - GG - XX -
 1 2 3 4 5 6 7 8

UPSTREAM DOWNSTREAM

Above part number describes an 8" 304L stainless steel valve,
304L SCH10 pipe extensions, no purge ports

1. Series (Material) Designator

SB - 304 Stainless Steel
DB - Epoxy coated Ductile Iron
SBS- 316 Stainless Steel

2. Valve Size

32 - 2"
48 - 3"
64 - 4"

3. Main Size Designator - (SHC's Only)

48 - 3"	128 - 8"
64 - 4"	160 - 10"
96 - 6"	192 - 12"

4. Valve Assembly Pattern Designator

STR - Straight 2-way
SHC - Single Horizontal Cross

5. Inlet Connection Designator

PLTE - 316 SS Presslok® (EPDM O-Ring)
PLHTE - 316 SS Presslok® (EPDM O-Ring/CFOS cleaned)
W - 304L SS Tube Extension
G - 304L Sch. 10 Pipe Extension
M - 316L SS Tube Extension
L - 316L Sch. 10 Pipe Extension

6. Outlet Connection Designator

W - 304L SS Tube Extension
G - 304L Sch. 10 Pipe Extension
M - 316L SS Tube Extension
L - 316L Sch. 10 Pipe Extension
PLTE - 316 SS Presslok® (EPDM O-Ring)
PLH TE- 316 SS Presslok® (EPDM O-Ring/CFOS cleaned)
US - SS ANSI blind flange
UP - PVC ANSI blind flange

7. Purge Port Designator (Upstream/Downstream)

X - No Purge Port
V - Purge Valve
P - Capped Compression purge port
Z - Capped Male Face Seal purge port

8. Options

NO - Normally Open Actuator - Spring Return
NC - Normally Closed Actuator - Spring Return
DA - Double Acting Actuator
GO - Gear Operator
LH - Lever Handle

Valve Sizing:

Rate of flow through a valve depends upon the pressure drop. The most common method of presenting this information is by Cv. The Cv is the valve coefficient of flow and represents the flow of water in gallons per minute (GPM) with a 1 psi pressure drop through the valve. The higher the Cv the greater the flow and the better the control characteristics. Throttling characteristics are shown in the same manner with Cv's at the various disc openings. Tabulated below are the Cv's for the SB/DB Series Butterfly Valves.

CV Chart (Water @ 70F, Specific Gravity = 1.00)	
Valve Size	CV (Disc Position @ 90° Degrees Open)
2"	120
3"	262
4"	430