SBE Elastomer-Lined Butterfly Valves

NPS 1½" – 32" · wafer or lug · Class 150

An elastomer-lined butterfly valve for shut-off, flow control and throttling of corrosive and abrasive media, liquid, powdery or gas. Two-piece cast body in wafer or lug style, a one-piece solid or encapsulated disc and shaft, an elastomer liner whose wide, corrugated flange face needs no additional gaskets, and a bare Double-D shaft (keyed from 18") on an ISO 5211 top flange as standard. Supplied bare or complete with locking handle (to 6"), manual gearbox or double- or single-acting pneumatic actuator.



Design

Sizes	NPS 1½" – 32", wafer (SBEW) or lug (SBEL). Wafer 1½" is a lug body with drilled-through holes.
Body	Cast steel WCB (1.0619), RAL 5005 signal-blue coated, or stainless CF8M (1.4408); 316L to order.
Liner	EPDM (black) standard; white EPDM, NBR, FPM, SBR or VMQ silicone to order.
Disc and shaft	One piece, solid or encapsulated min. 0.12 in (3 mm), with polished sealing surface. Solid duplex (1.4462) standard; solid 316L, titanium Gr. 2 and Gr. 7 and alloy C, or PFA, PFA-AS, PVDF, PP or ETFE encapsulation, to order.
Shaft and bearings	Double-D shaft to EN 12116 with rated breaking point (to 16"; keyed from 18"); three PTFE-lined steel-backed bushings; FPM O-ring at the top flange.
Connections	Flanges to ASME B16.5 Class 150; Class 300, PN10, PN16 and JIS 10K to order. Face-to-face to ASME B16.10. ISO 5211 top flange with O-ring: DD drive to 16", one keyway 18" – 24", two keyways 90° offset 28" and 32".
Pressure	Up to 232 psig by size: 232 psig 1½" – 6", 145 psig 8" – 24", about 87 psig 28" – 32"; lower at temperature with PP, PVDF, ETFE or PFA encapsulated discs. No vacuum rating is published. Pressure-temperature chart on the Swissfluid sheet.
Temperature	−40 °F to +400 °F (−40 °C to +204 °C) depending on liner: EPDM −31 °F to +284 °F (−35 °C to +140 °C); EPDM-HT −31 °F to +302 °F (−35 °C to +150 °C); NBR −4 °F to +212 °F (−20 °C to +100 °C); FPM +14 °F to +356 °F (−10 °C to +180 °C); VMQ −94 °F to +446 °F (−70 °C to +230 °C). Low-temperature or austenitic steels required below +14 °F (−10 °C).
Compliance	Bubble-tight shut-off; pressure and tightness testing to EN 12266-1 leakage rate A / API 598; marking to EN 19; certificates to EN 10204 3.1 / 2.2 / 2.1; conformity with the European Pressure Equipment Directive (PED).

Source: Swissfluid USA PM 52 us 2019-11.

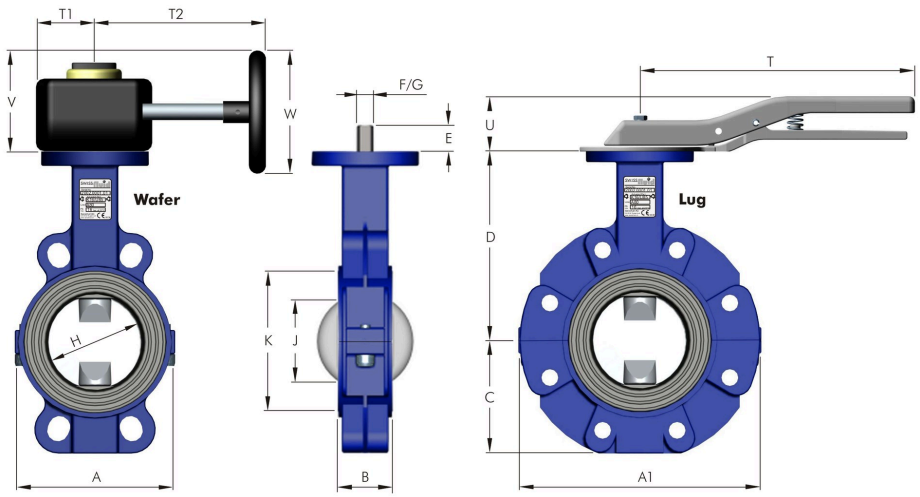
Main features

- Heavy-duty, compact, maintenance-free construction
- Bubble-tight across the full pressure and temperature range
- Wide choice of liner and disc materials for economical performance
- Standardized ISO mounting flange for easy fitting of actuator options
- No additional flange gaskets: wide, corrugated flange sealing surface
- One-piece disc and shaft for hysteresis-free control; polished sealing surface, low torque
- Streamline flow contour for maximum capacity
- Class 150 flanges (DIN optional) for existing piping

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Dimensions and ordering code

swissfluid USA



Dimensions, inches · wafer and lug bodies

Size	A wafer	A1 lug	B width	C	D	ISO 5211	T lever
1½"	—	5.71	1.30	2.52	4.29	F07	9.06
2"	4.65	6.30	1.69	2.72	4.88	F07	9.06
2½"	4.72	7.09	1.81	3.11	5.67	F07	9.06
3"	5.28	7.95	1.81	3.66	6.26	F07	9.06
4"	6.38	9.13	2.06	4.21	7.24	F07	10.63
5"	7.28	10.59	2.20	4.69	7.83	F07	10.63
6"	9.76	11.38	2.20	5.12	8.23	F07	12.80
8"	10.75	13.74	2.37	6.22	9.41	F10	—
10"	12.91	15.75	2.68	7.80	10.39	F10	—
12"	14.88	18.50	3.09	9.02	10.39	F10	—

Face-to-face B to ASME B16.10 (wafer); the widths agree with EN 558-1 series 20 through 12". Flanges to ASME B16.5 Class 150. 1½" wafer bodies are lug bodies with drilled-through holes. 14" and larger: dimensions on request. Source: Swissfluid USA PM 52 us 2019-11.

Note. Torques on the Swissfluid sheet are break-away values without actuator safety factors.

Ordering code

Build a code from left to right; a standard valve is **SBEW · 4" · ANSI150# · G10 · A60 · S16 · DD**. Some selections require or exclude others; we check every code before it goes to the factory.

Product	**SBEW** wafer · **SBEL** lug
Size	**1½"–32"** NPS · **DN40–800** metric
Flange	**ANSI150#** ASME Class 150 · **ANSI300#** ASME Class 300 · **PN16** PN16 · **PN10** PN10 · **JIS 10K** JIS 10K
Body	**G10** WCB carbon steel · **G15** CF8M stainless · **G34** 316L stainless
Liner	**A60** EPDM · **A61** EPDM white · **A64** NBR · **A67** FPM · **A68** VMQ silicone · **A69** SBR
Disc	**U85** PFA encapsulated · **U86** PFA-AS encapsulated · **U88** PVDF encapsulated · **U89** PP encapsulated · **U91** ETFE encapsulated · **S16** solid duplex · **S32** solid 316L · **S40** solid Ti Grade 2 · **S41** solid Ti Grade 7 · **S43** solid alloy C
Shaft end	**DD** Double-D drive · **SP** square parallel · **SR** square 45° rotated
Options	**Po** polished disc · **TA** TA-Luft · **Th** thru holes · **B7** B7 bolts · **Ti** titanium bolts · **RAL** special paint

Data and codes: Swissfluid USA PM 52 us 2019-11.

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Options, construction and service

Options

- **Liners** EPDM white, NBR, FPM, SBR, VMQ silicone
- **Disc materials** Solid 316L, titanium Gr. 2 or Gr. 7, alloy C; PFA, PFA-AS, PVDF, PP or ETFE encapsulation
- **Polished disc** Polished disc execution
- **TA-Luft** TA-Luft execution
- **Thru holes** Drilled-through flange holes
- **Flange connections** Class 300, PN10, PN16, JIS 10K
- **Bolting** B7 or titanium bolts
- **Paint** Special RAL color
- **Actuation** Locking handle (to 6"), manual gearbox or SPA pneumatic actuator on an ISO mounting kit, with electro-pneumatic positioner, limit switch box, solenoid valve, NAMUR bracket, position indicator and manual override

Construction. Two-piece wafer or lug body in WCB or CF8M, EPDM liner, solid duplex disc and shaft, three PTFE-lined steel-backed bushings, FPM top O-ring, A2-70 stainless body bolting, SS304 name plate.

Typical service. Chemical and petrochemical, food processing, paint and pigments, fertilizers, mining and steel, desalination. *LinedPipe.Com note: the liner and disc must suit the medium. EPDM, the standard liner, is not for hydrocarbons or oils (specify NBR or FPM), and seawater or brine takes a titanium or encapsulated disc in place of the standard duplex.*

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Ordering from LinedPipe.Com

Size, series, lining, class and quantity are enough to start. For a quotation send the service conditions (media, concentration, temperature, pressure, flow), the end connections and, for a valve, the actuation you need; we will confirm the ordering code, the installation dimensions and a delivery time.

Request a quote

(251) 625-4949 · info@linedpipe.com · linedpipe.com/contact/
(the online quote form takes valves line by line and attachments).

What to tell us

- Series and size, flange class, and full or reduced port where the series offers both
- Lining, and the ball, disc, glass, seat and elastomer materials where the series has them
- Body material: carbon steel or stainless, as the series offers
- For a valve, the topworks: bare stem, lever, gearbox, pneumatic or electric actuator, fail position, accessories
- Options from the series' ordering code, such as a conductive lining or special bolting
- Certificates: EN 10204 3.1 material certificates and test reports on request

Dimensions

Face-to-face lengths in our valve catalog are stated against ASME B16.10, MSS SP-88, EN 558-1 or EN 12982, as the note under each table says; where a table mixes standards, lengths marked * are not to the US standard. Confirm the installation length on the order acknowledgement before cutting pipe.

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Version 1.25 · Released 11-17-2026. Product data from Swissfluid literature as cited under each table; subject to change without notice. **Confirm critical dimensions with the order acknowledgement.**