

SBE Elastomer-Lined Butterfly Valves

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

swissfluid
USA

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 on an ISO 5211 top flange as standard. Supplied bare or complete with locking handle, 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 standard (black or white); EPDM-HT, NBR, FPM, SBR or VMQ silicone to order.
Disc and shaft	One piece, solid or encapsulated min. 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; 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 psi, depending on size, disc material and temperature. Rated pressure steps down by size band (1½" – 6", 8" – 24", 28" – 32") and, for encapsulated discs, with PP, PVDF, ETFE or PFA at temperature; pressure-temperature chart on the Swissfluid sheet.
Temperature	–40 °F to +400 °F depending on liner: EPDM –31 °F to +284 °F; EPDM-HT –31 °F to +302 °F; NBR –4 °F to +212 °F; FPM +14 °F to +356 °F; VMQ –94 °F to +446 °F. Low-temperature or austenitic steels required below +14 °F.
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, Options, Construction and service



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. 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 · size · 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 · DN25-1000 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.

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, 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.

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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 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, full or reduced port, Class 150 or 300
- Lining and ball or disc material, seat and elastomer where they apply
- Body material: WCB carbon steel or CF8M stainless
- Topworks: bare stem, lever, gearbox, pneumatic or electric actuator, fail position, accessories
- Options: conductive lining, grounding strap, chlorine clean, customer tag, special bolting
- Certificates: EN 10204 3.1 material certificates and test reports on request

Dimensions

Face-to-face lengths in this catalog are stated against ASME B16.10 or EN 558-1 as noted; sizes marked * are not ASME B16.10 lengths (the note under each table says what they are). Confirm the installation length on the order acknowledgement before cutting pipe.

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