SBP PTFE-Lined Butterfly Valves

NPS 1" – 42" · wafer or lug · Class 150

swissfluid USA

A PTFE-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 disc and shaft, solid or PFA-encapsulated, a reinforced liner whose wide, chambered 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 1" – 42", wafer (SBPW) or lug (SBPL). Wafer 1" – 1½", 18" and 30" – 42" are lug bodies with drilled-through holes.
Body	Cast steel WCB (1.0619), RAL 5005 signal-blue epoxy coated, or stainless CF8M (1.4408); 316L (1.4435) to order.
Liner	PTFE standard; PTFE-T (modified), PTFE-AS (conductive), PVDF or UHMWPE to order. Min. 0.12 in (3 mm) thick, optimized and reinforced shape, with FPM backing (EPDM or VMQ to order).
Disc and shaft	One piece, solid or encapsulated min. 0.12 in (3 mm), with polished sealing surface. PFA-encapsulated duplex (1.4462) standard; PFA-AS, PVDF, PP or ETFE encapsulation, or solid duplex, 316L, titanium Gr. 2 and Gr. 7 and alloy C, to order.
Shaft seal and bearings	Dynamic shaft seal: FPM elastomer inserts and pads, 316L pressure and guide rings, Belleville springs in spring steel. Triple PTFE-lined steel-backed shaft bushing. Double-D shaft to EN 12116 with rated breaking point to 16"; keyed from 18".
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" – 42".
Pressure	To 232 psig, stepping down by size: about 232 psig 1" – 6", 150 psig 8" – 24", 87 psig 28" – 36" and 44 psig at 42", and with liner at temperature. Vacuum: full vacuum through 14", to about 210 °F (99 °C); 16" – 24" not below about 5 psia; 28" – 42" not rated for vacuum. Pressure-temperature charts on the Swissfluid sheet.
Temperature	−40 °F to +450 °F (−40 °C to +232 °C) depending on liner. 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 51 us 2021-01.

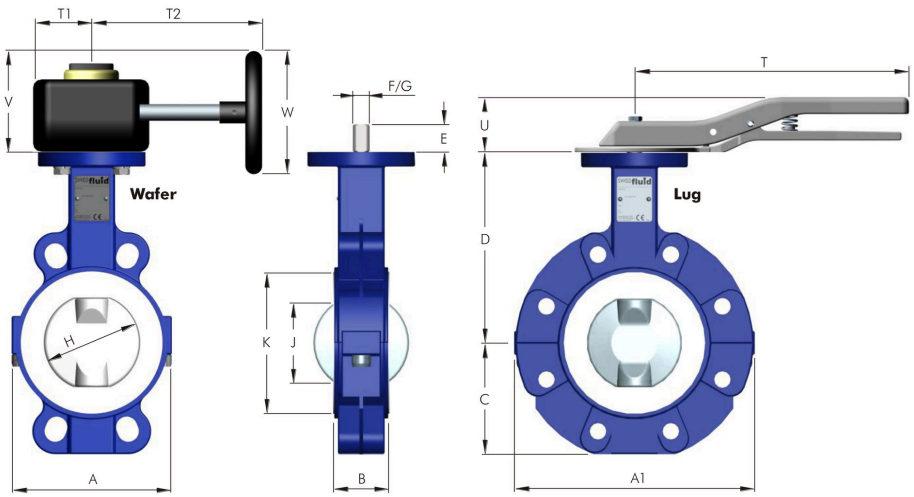
Main features

- 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
- Shaft sealing built for automated service and high operating pressures
- No additional flange gaskets: wide, chambered 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

LinedPipe.Com note. The liner's elastomer backing narrows the temperature range: Swissfluid's elastomer table gives FPM, the standard backing, +14 °F to +356 °F (−10 °C to +180 °C), and VMQ silicone −94 °F to +446 °F (−70 °C to +230 °C). Send the temperature and we will choose the backing.

SBP PTFE-Lined Butterfly Valves

Dimensions, options



Dimensions, inches · wafer and lug bodies

Size	A wafer	A1 lug	B width	C	D	ISO 5211	T lever
1"	—	4.53	1.30	1.81	3.43	F05	9.06
1¼"	—	4.53	1.30	1.81	3.43	F05	9.06
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". 1" and 1½" wafer bodies are lug bodies with drilled-through holes. Flanges to ASME B16.5 Class 150. 14" and larger: dimensions on request. Source: Swissfluid USA PM 51 us 2021-01.

Note. Never specify the same material for liner and disc encapsulation; torque rises considerably. Torques on the Swissfluid sheet are break-away values without actuator safety factors. 14" optionally 3.07 in face-to-face (ASME B16.10 wide).

Options

- **Liners** PTFE-T (modified), PTFE-AS (conductive), PVDF, UHMWPE
- **Disc materials** PFA-AS, PVDF, PP or ETFE encapsulation; solid duplex, 316L, titanium Gr. 2 or Gr. 7, alloy C
- **Polished disc** Polished disc execution
- **TA-Luft** TA-Luft execution
- **Thru holes** Drilled-through flange holes
- **Elastomers** FPM standard; EPDM, VMQ silicone
- **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

SBP PTFE-Lined Butterfly Valves

Ordering code, construction and service

Ordering code

Build a code from left to right; a standard valve is **SBPW · 4" · ANSI150# · G10 · A80 · E67 · U85 · DD**. Some selections require or exclude others; we check every code before it goes to the factory.

Product	**SBPW** wafer · **SBPL** lug
Size	**1"–42"** 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	**A80** PTFE · **A81** PTFE-T modified · **A82** PTFE-AS conductive · **A88** PVDF · **A90** UHMWPE
Elastomer	**E60** EPDM · **E67** FPM · **E68** VMQ silicone
Disc	**U85** PFA encapsulated · **U86** PFA-AS encapsulated · **U88** PVDF encapsulated · **U89** PP encapsulated · **U91** ETFE encapsulated · **S16** solid duplex · **S34** 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 51 us 2021-01.

Construction. Two-piece wafer or lug body in WCB or CF8M, PTFE liner, PFA-encapsulated duplex disc and shaft, FPM elastomers, pads and inserts, 316L pressure and guide rings, Belleville springs in spring steel, three PTFE-lined steel-backed bushings, FPM top O-ring, A2-70 stainless body bolting, SS304 name plate.

Typical service. Chemical and petrochemical, pharmaceutical, semiconductor, pulp and paper, food processing, paint and pigments, fertilizers, mining and steel, desalination. *LinedPipe.Com note: PTFE is chosen for chemistry, not grit; for a chemically compatible abrasive slurry, specify the PVDF or UHMWPE liner.*

SBP PTFE-Lined Butterfly Valves

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.

LinedPipe.Com
A DIVISION OF MARSPEC

IN PARTNERSHIP WITH

swissfluid USA

LinedPipe.Com

Marspec Technical Products, Inc.
24042 US Highway 98, Fairhope, AL 36532
(251) 625-4949
info@linedpipe.com · linedpipe.com

Swissfluid USA, Inc.

10303 Greenland Court
Stafford, TX 77477
swissfluid.com

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.**