SSB Full-Port Sampling Ball Valves

NPS ½" – 6" full port · Class 150 · PN16 and PN40 to order

swissfluid USA

A full-port sampling ball valve for safe, representative sampling of aggressive or toxic liquids from pressurized pipelines without interrupting the process. A fixed sample of approx. 40 ml (1.35 oz) is captured in the ball cavity and isolated from the process as the lockable handle turns 180° between its two stops, then drains into the laboratory bottle through the only opening to atmosphere. CF-8M body, unlined or PFA-lined, with an ISO 5211 flange for direct actuation.



Design

Sizes	NPS ½" – 6" (DN15 – DN150), full port, piggable. Flanged, ASME Class 150; PN16 and PN40 to order.
Body	Stainless steel casting 1.4408 (CF-8M), unlined or lined with PFA or PFA-AS (conductive). Lining tested for porosity at 35 kV.
Ball	Duplex stainless (1.4462) encapsulated in ETFE, with a 40 ml cavity; PFA-AS encapsulation, solid SS316L or alloy C-276 to order.
Seats	PFA, one seat spring-loaded; PFA-AS, PTFE, PTFE-T or PTFE-R to order.
Topworks	Zero stem leakage: stem seal live-loaded by four Belleville springs in spring steel. Lockable SS316L hand lever with two stops for 180° motion; operating torque 180 in-lbs, all sizes. ISO 5211 flange (Ø14-DD11-F05) for direct mounting of pneumatic or electric actuators.
Adapter	GL45 horizontal adapter in PTFE-R/PVDF standard; vertical adapter to order.
Pressure	0.01 psia to 232 psi depending on size, lining and temperature. Pressure-temperature chart on the Swissfluid sheet.
Temperature	−40 °F to +300 °F (−40 °C to +149 °C) (+400 °F [+204 °C]), depending on lining material; the chart shows separate lined and unlined curves.
Compliance	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 to the European Pressure Equipment Directive (PED).

Source: Swissfluid USA PM 84 us 2021-07.

Main features

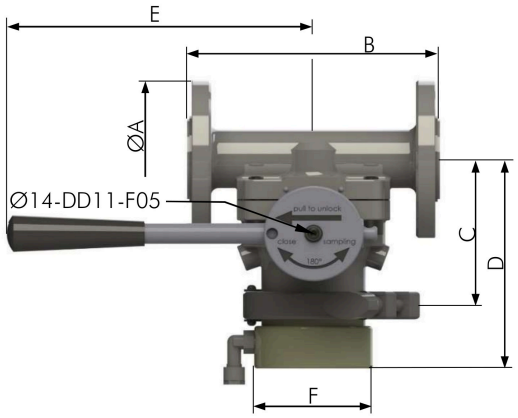
- Full-port design, no pressure drop, piggable
- Fixed sample volume of approx. 40 ml (1.35 oz), isolated from the process as the valve is operated
- Only one opening to the atmosphere
- Lockable handle with two stops for easy 180° motion
- ISO 5211 flange for direct automation with pneumatic or electric actuators
- Zero stem leakage by an innovative stem sealing mechanism
- Easy maintenance, same spare parts for all sizes

Options

- **Purge connection** Two connections on the body (code Pu)
- **Vertical adapter**
- **Actuation** Pneumatic or electric actuator, with optional timer unit
- **Bottle support** Adjustable, with spring-loaded plate
- **Safety cabinet** Stainless or PP, with windows
- **Activated carbon filter**
- **Sealing plug**
- **Safety lock** Prevents unauthorized operation of the valve
- **RAL** Special paint

SSB Full-Port Sampling Ball Valves

Dimensions



Dimensions, inches

Size	B face-to-face	Ø A flange	C	D	E	F	Torque in-lbs	Valve lbs
½"	6.3*	3.5	3.8	5.5	10	3.1	180	10
¾"	6.3*	3.88	3.9	5.6	10	3.1	180	11
1"	6.5*	4.25	3.9	5.6	10	3.1	180	11
1½"	6.5	5.0	4.2	5.9	10	3.1	180	14
2"	7.0	6.0	4.4	6.1	10	3.1	180	17
3"	8.0	7.5	5.0	6.7	10	3.1	180	27
4"	9.0	9.0	4.4	7.2	10	3.1	180	42
6"	11.0*	11.2‡	6.5	8.2	10	3.1	180	57

Weights are for the valve without its lever (lever 2.0 lbs every size). The sheet names no face-to-face standard; * ½", ¾", 1" and 6" lengths are not ASME B16.10 lengths; confirm the installation length when ordering. Flanges Class 150. ‡ DIN-size flange diameter, as Swissfluid's sheet gives it.

Source: Swissfluid USA PM 84 us 2021-07.

Note. Pressure-temperature derating (lined and unlined curves) on the Swissfluid sheet. Actuators, adapter options and accessories are specified separately.

SSB Full-Port Sampling Ball Valves

Ordering code, construction and service

swissfluid USA

Ordering code

Build a code from left to right; a standard valve is **SSB · 1" · ANSI150# · G15 · A85 · E67 · U91 · B85 · options**. Some selections require or exclude others; we check every code before it goes to the factory.

Nom. size	**DN15 – 150** DN · **½" – 6"** NPS
Body rating	**PN16** PN16 · **PN40** PN40 · **ANSI150#** ASME Class 150
Body	**G15** CF-8M
Body lining	**A85** PFA · **A86** PFA-AS · **-** unlined
Elastomer	**E60** EPDM · **E67** FPM · **E68** VMQ
Ball (encaps./solid)	**U91** ETFE · **U86** PFA-AS · **S34** SS316L · **S43** C-276 · **XX** others
Ball seats	**B85** PFA · **B86** PFA-AS · **B80** PTFE · **B81** PTFE-T · **B95** PTFE-R
Options	**Pu** purge connection · **RAL** special paint · **...** others

Data and codes: Swissfluid USA PM 84 us 2021-07.

Construction. Body and ball housing in CF-8M, PFA-lined; ETFE-encapsulated duplex ball; PFA seats, one spring-loaded; stem seal live-loaded by four Belleville springs; SS316L pressure sleeve and threaded bushing with PTFE sealing sleeve and carbon steel/PTFE bearing; VMQ elastomer insert; FPM and FFPM O-rings; A2-70 socket-head cap screws and name plate; SS304 clamp; SS316L hand lever; PTFE-R/PVDF GL45 horizontal adapter.

Typical service. Sampling of aggressive or toxic liquids from pressurized pipelines, in horizontal or vertical installation, without process interruption; the line keeps full passage and stays piggable.

SSB Full-Port Sampling Ball 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.**