SRS Reactor and Vessel Sampling Systems

1" – 4" (DN25 – DN100) · PFA or PFA-AS lined · Class 150 · PN16, PN25 and PN40

swissfluid USA

Closed systems for safe, representative sampling of liquid media from reactors and vessels, reliable and fast, without process interruption. The self-draining unit is mounted at the top, eliminating the possibility of leakage; liquid is drawn into a borosilicate sight glass by vacuum, overpressure or a diaphragm pump, and the sample is run off through an inline sampling valve into a laboratory bottle. Each system is tailor-made to a detailed specification, with a wide range of accessories on the basic versions.



SRS-P



SRS-P-E



SRS-P-P

SRS-P (PFA-lined)

The basic system. Sampling is carried out via additional fittings by means of vacuum or overpressure. Operating conditions, depending on material selection: main valve 7.25 psia (vacuum) to 232 psi, sight glass unit 7.25 psia to 145 psi; −40 °F to 392 °F (−40 °C to 200 °C).

SRS-P automated

The fully automated version of the SRS-P, with control panel. It allows pre-purging or cleaning of the entire system and has an integrated pH/temperature or redox port. Robust construction assures easy and safe operation at any time.

SRS-P-E for reactors and vessels

For reactors and vessels with neither pressure nor vacuum: an inert-gas ejector (the suction nozzle) draws the sample. Light weight, economical and suitable for almost all vessels and reactors; it can be configured many different ways. The liquid is conveyed with pressure or vacuum through the opened main charge valve into the sight glass. Once the maximum level is reached the main charge valve is closed and the sample is emptied through the inline sampling valve into the laboratory bottle; residual gases are discharged via the vent connection or returned to the process via the gas return line. The main charge valve can be an SDV diaphragm, SBV ball or SCP cylindrical plug valve, with suction nozzle and purge connection.

SRS-P-P with pump

PFA-lined, with a PTFE diaphragm pump: automation of a loop system. A self-priming compressed-air diaphragm pump circulates the process liquid from the reactor through a suction hose into the sight glass unit and back to the reactor via a loop; during circulation a continuous, representative sample is taken via an inline sampling valve into a lab bottle, with optional integrated pH, temperature or redox measurement, without interrupting the process. The pump generates a constant flow and allows multiple samples in one cycle; separate flow and return lines give greater stability and flexibility for a compact installation. Operating conditions, depending on material selection: main valve 7.25 psia (vacuum) to 232 psi, pump up to 102 psi max.; −40 °F to 248 °F (−40 °C to 120 °C), pump dependent.

SRS-P-P automated with pump

Suction line and pressure line are separate, allowing a direct and representative sample in the loop. The main valves are automated for easy and safe operation.

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Versions

Technical data

Versions DIN, ISO, ANSI. Flanges DIN PN16 / PN25 / PN40 or ANSI 150 lbs. Lining PFA or PFA-AS (conductive). Glass cylinder borosilicate. Hollow ball and seat PTFE / FFPM. Sample volume 150 or 250 ml (5.1 or 8.5 oz). Pump PTFE or PTFE-AS (conductive). SRS systems are not suitable for any boiling media; for those, special loop systems can be offered.

Options

Main charge valve as SDV diaphragm, SBV ball or SCP cylindrical plug valve; purge connection; vent and gas return line; pH, temperature, redox and seeding connections; needle adapter; safety cabinet; activated carbon filter; metal safety basket; piston injector; control panel on automated versions.

Main features

- Simple and safe sampling from tanks and reactors
- Application-specific system design, tailor-made to detailed specification
- No dead space for representative sampling
- Compact design
- Advanced system for mounting additional customer-specified components
- User-friendly design with maximum safety
- Permanent monitoring possibility before and during sampling
- Self-draining unit mounted at the top, eliminating the possibility of leakage

Systems are engineered to the application; send the vessel nozzle, media and sample volume and we will configure one with Swissfluid USA.

Source: Swissfluid brochure Sampling Valves and Systems; swissfluid.com SRS pages.

SRS Reactor and Vessel Sampling Systems

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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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

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