



# A QUICK LOOK AT OUR FLUID SYSTEM SOLUTIONS

Swagelok®

# WHO WE ARE

Leverage our global experience to address the pressures you face with 20 manufacturing centers and 200-plus sales and service centers across more than 70 countries.

## Your Pressures – Our Solutions

We understand the pressures you face – fewer available resources, a less-experienced workforce, and new technologies. As a leading developer and provider of fluid system services, systems, and products, Swagelok has the experience, insight, and support you need.

We invite you to learn more about our solutions used in the most demanding applications across a range of industries, including oil and gas, chemical and petrochemical, semiconductor, and transportation.

### **Our Services - Our Systems - Our Products**

Swagelok's commitment to the success of our customers and our focus on innovation, quality, and reliability span seven decades. You can count on Swagelok to create the most innovative solution to help your business succeed.



# OUR SERVICES

Maximize your resources to diagnose a problem, design a solution, and train your workforce.



## Evaluation and Advisory Services

Let our experts visit your facility, evaluate your systems, and identify enhancements that will improve your operations. You will receive a detailed report with recommended solutions tailored to your toughest fluid system applications and challenges.

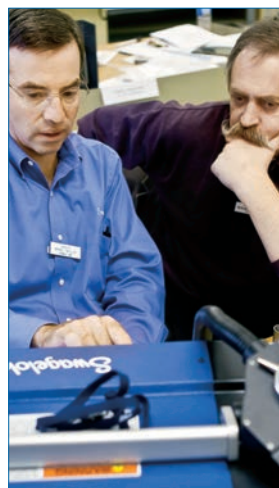
Swagelok offers evaluation and advisory services for analytical sampling systems, grab sampling systems, and other fluid and gas system installations. Our fluid system professionals will quantify leaks, spot common installation errors, and share best practices for product selection and usage for your applications.



## Swagelok® Custom Solutions

Tap into the full capabilities that Swagelok has to offer: 70 years' experience in fluid system solutions, deep industry expertise, and the ability to fabricate and deliver consistent, high-quality assemblies globally.

Your authorized Swagelok representative will work with you to create anything from basic to highly engineered and complex assemblies.



## Training and Education

Explore Swagelok's training and education programs that can help you solve day-to-day challenges and keep your fluid systems operating smoothly. From an array of instructor-led, in-depth courses taught by industry experts and factory-certified trainers to online training videos, Swagelok equips your team to work safely and effectively.

Training topics include the design and maintenance of analytical sampling systems,

proper installation of fluid system components, how to bend tubing, how to regulate and control fluid systems, materials science, orbital welding, and safe product selection.

# OUR SYSTEMS

Improve the quality of your samples, protect your mechanical seals, and enable accurate results.

## Mechanical Seal Support

Swagelok seal support systems provide easy-to-configure, locally built, and reliable solutions to help you reduce costs, save time, and improve safety. Available as seal plan assemblies or kits, all systems are based on standard API 682 plans and are customizable for your application. Refer to *Mechanical Seal Support Systems API 682 Seal Plans Application Guide*, MS-02-482, for additional information.



## Analytical Instrumentation

Swagelok analytical instrumentation products bring precision and reliability to sampling systems by monitoring, measuring, and reacting to process changes. Both standard and modular products—like our pre-engineered subsystems—enhance accuracy by maintaining pressure, temperature, flow, and other analytical measurements.

### Grab Sampling

Swagelok grab sampling systems enable safe, efficient sample capture—meeting your specific plant application needs. Refer to *Grab Sampling Systems Application Guide*, MS-02-479, for additional information.





### Stream Selector System

Analyze multiple process streams and obtain real-time results with the stream selector modular system designed to eliminate cross-contamination of samples.

- Single compact module provides double block and bleed operation
- Integrated flow loop provides consistent outlet flow
- Built-in pneumatic actuator provides repetitive shutoff with fewer potential leak points than conventional systems
- Compact design saves cabinet space and reduces internal volume



### Miniature Modular Systems

Conduct analyses at the process line and obtain real-time results with miniature modular systems that minimize design, build, and maintenance time.

- Analytical MPC modular platform components
- Wide variety of surface-mount components available
- Easy-to-assemble, compact design

### Pre-Engineered Subsystems (PrESS)

Minimize system footprint and simplify system design with our series of predesigned and preassembled, easy-to-install and -operate subsystems for use in all types of plants and facilities where fluids are being processed.



### Fluid Distribution Header (FDH)

Catalog - MS-02-358



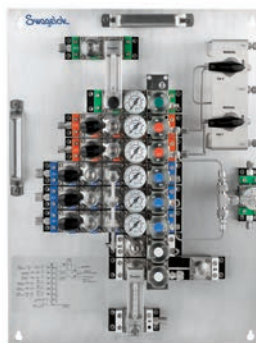
### Field Station Module (FSM)

Catalog - MS-02-359



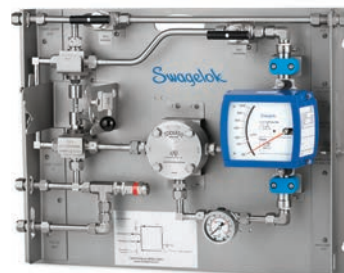
### Sample Probe Module (SPM)

Catalog - MS-02-425



### Calibration and Switching Module (CSM)

Catalog - MS-02-360



### Fast Loop Module (FLM)

Catalog - MS-02-361

# OUR PRODUCTS

Choose from a selection of high-quality and reliable products for your applications.



## Tube Fittings

Count on reliable, leak-tight performance as a result of our proven design, manufacturing excellence, and superior raw materials.

- Available in tube sizes 1/16 to 2 in. and 2 to 50 mm
- Wide variety of materials and configurations
- Consistent gaugeability upon initial installation
- Easy to disassemble and reassemble

**Types:** Swagelok mechanical grip-type, hinging-colletting™ tube fittings, weld, tube adapters, biopharm, dielectric, fine thread flare, flange, pipe, vacuum

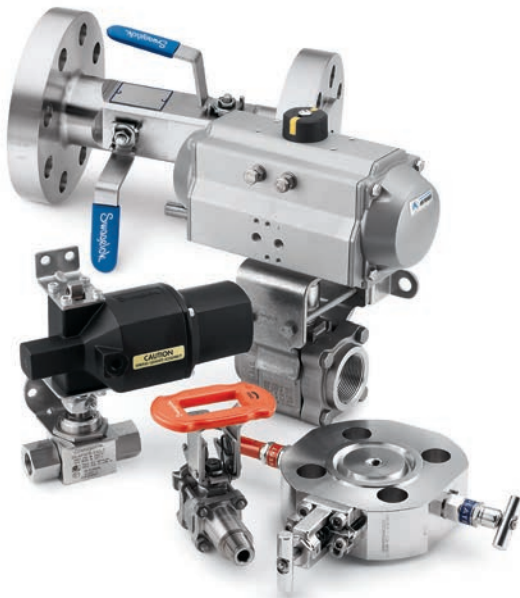


## High-Purity Fittings

Ensure cleanliness with electropolished and specially cleaned fittings that feature controlled surface finishes.

- Available in sizes 1/16 to 1 in. and 6 to 18 mm
- High-purity stainless steels
- Wide variety of configurations

**Types:** VCR® metal gasket face seal, VCO® O-ring face seal, weld, Micro-Fit® weld



## Process Valves and Manifolds

Create a smooth transition from the process piping system to instrumentation in a single configuration, with fewer potential leak points.

- Integral tube fitting ball valves in sizes up to 2 in. and 50 mm
- Flanged process interface valves up to 2 in. (DN50)
- Large variety of special application valves

**Types:** Ball, needle, single block, single block and bleed, double block and bleed, manifold



## Instrumentation Valves

Depend on leak-tight performance for years of use—even in the most demanding applications.

- Wide variety of end connections including integral Swagelok tube fittings, male and female pipe end fittings, VCR metal gasket face seal fittings
- Broad operating temperature range (–325 to 1200°F, –200 to 648°C)
- Large selection of materials and sizes up to 2 in. or 25 mm
- Working pressures up to 15 000 psig (1034 bar)
- Large variety of special-application valves
- High-cycle, high-integrity sealing

**Types:** Ball, bleed and purge, check, excess flow, manifolds, metering, needle, quarter-turn plug, relief



## Packless Valves

Eliminate packing replacement and enhance clean operation with all metal seals to atmosphere.

- High-cycle, high-integrity sealing
- Low- and high-pressure models available
- All metal containment in metal valves
- Shutoff, bulk-gas distribution, and isolation service
- Stainless steel and PFA materials suited for ultrahigh-purity applications

**Types:** Bellows-sealed, diaphragm-sealed

## Medium- and High-Pressure Fittings, Tubing, Valves, and Accessories

Benefit from leak-tight gas seal and vibration resistance—even in high-risk, high-vibration environments.

- 316 stainless steel and other alloys are available to meet NACE MR0175/ISO 15156 and offshore marine environments
- Broad applications within oil and gas, chemical, petrochemical, hydrogen transportation, water jet cutting, and aerospace industries

**Fitting Types:** Medium-pressure Swagelok tube fitting with hinging-colleting™ grip type, cone and thread

**Valve Types:** Ball, needle, single block and bleed, double block and bleed, check, relief



## Regulators

Ensure consistent delivery of the right pressure across a variety of applications, with a wide range of regulator technologies.

- Instrumentation-grade and ultrahigh-purity models
- Diaphragm- and piston-sensing mechanisms
- Maximum inlet pressures up to 10 000 psig (689 bar)
- Wide variety of control ranges

**Types:** Pressure reducing, back pressure, changeover, dome-loaded, differential pressure, vaporizing, ratio-loaded

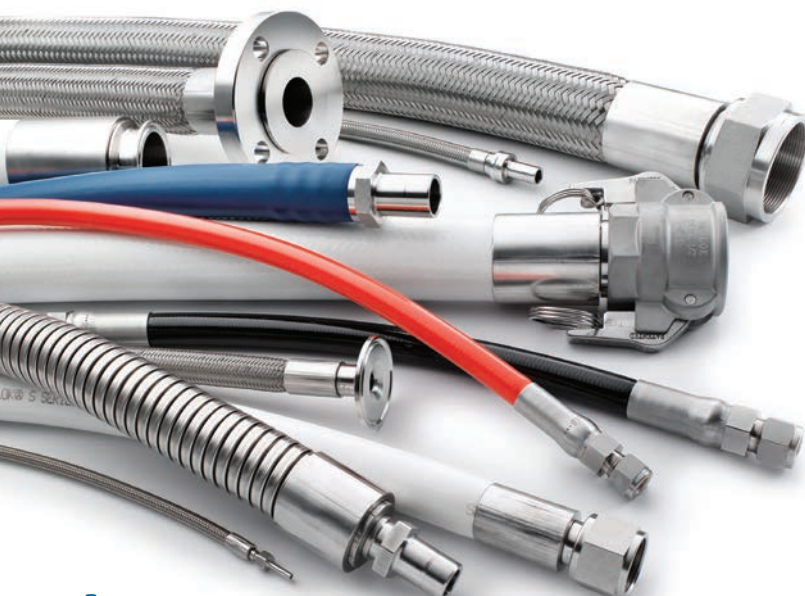


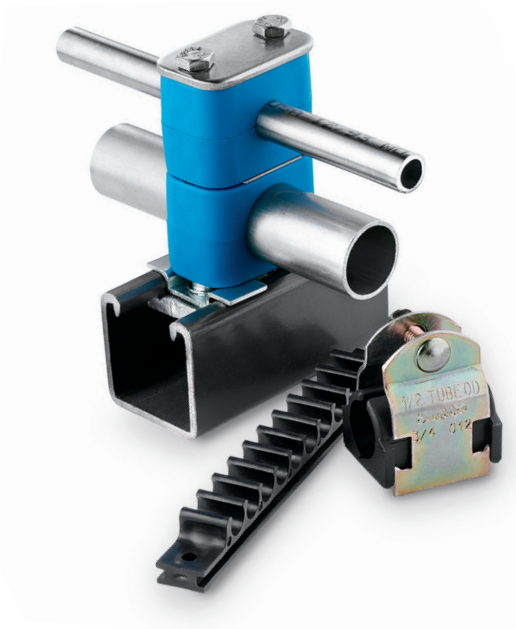
## Hose and Flexible Tubing

Keep your process performing safely with reliable, leak-tight connection technology, coupled with a wide variety of hoses for almost any application.

- Standard and custom lengths and end connection combinations available
- Wide variety of types and materials
- Broad operating pressure and temperature range
- Available in hose and tubing sizes 1/8 to 2 in. and 3 to 50 mm; range of fractional and metric end connections

**Types:** Metal, PTFE, PFA, vinyl, nylon, polyethylene, and rubber core materials; general-purpose, high-purity, and vacuum hose and flexible tubing





## Tubing and Tools

Choose dependable tubing in a wide variety of materials for virtually any industry or application. Tools for cutting, bending, and deburring tubing for repeatable results and leak-tight performance.

- Instrumentation and ultrahigh-purity stainless steel tubing from 1/16 to 4 in. OD and 3 to 25 mm OD
- Tube benders and tube preparation tools
- Manual and hydraulic swagers, gauges, wrenches
- Tube support system for tube and hose sizes 1/4 to 1 in. and 6 to 25 mm

**Tubing Types:** Chemically cleaned and passivated tubing, ultrahigh-purity stainless steel tubing, medium-pressure heavy-walled annealed tubing, insulated and jacketed tubing, pre-insulated tubing bundles



## Measurement Devices

Obtain accurate, on-demand pressure, temperature, and flow measurement readings.

- Vertical flow sensors
- Gauges
- Thermometers and thermowells
- Transducers
- Variable area flowmeters

**Gauge Types:** Clean dry air, ECE R110-approved, industrial, process, sanitary, panel-builder, positionable, ultrahigh-purity

**Transducer Types:** Industrial, explosion-proof, intrinsically safe



## Quick-Connects

Enable quick, simple operation without twisting, turning, or wrenching.

- Design minimizes spillage and air inclusion
- Push-to-connect design enables quick, simple operation
- Wide variety of configurations, end connections, and stem and body connectors

**Types:** Instrumentation, single-end shutoff, double-end shutoff, full-flow, miniature, PTFE-sealed



## Sample Cylinders

Protect product integrity during transport with cylinders featuring consistent wall thickness, smooth internal neck transitions for easy cleaning, and heavy-wall connections that resist flaring.

- Sizes from 10 to 3785 cm<sup>3</sup> (1 gal)
- 304L, 316, 316L, and Alloy 400
- Working pressures up to 5000 psig (344 bar)
- Variety of options including integral valves, outage tubes, color-coding, and specialty coatings

**Types:** Sampling, transportation-compliant (DOT, TPED, Transport Canada, CCC), single- and double-ended



## Filters

Remove liquid or particulate contaminants reliably with repeatable results.

- Available for liquid and gas service
- All-welded, inline, and tee-type configurations
- End connection sizes 1/8 to 3/4 in. and 3 to 12 mm
- Wide variety of filter media available
- Ceramic filtering technology for ultrahigh-purity applications

**Types:** Coalescing, particulate, high-purity



## Leak Detectors, Lubricants, and Sealants

Detect, eliminate, and avoid leaks before they impact system performance.

- Snoop® liquid leak detectors
- Blue Goop™, Pure Goop™, Silver Goop™, and Vac Goop™ lubricants
- PTFE tape, PTFE-free sealant, and SWAK® anaerobic thread sealants



## Welding System

Achieve cost-effective and repeatable tungsten arc welds with a lightweight, portable welding power supply and weld heads. Consistent, efficient orbital welding system combines precision and control with easy-to-use touchscreen operation. Meets ASME-BPE welding standards.

**Types and Accessories:** Traditional and high-purity power supplies, weld heads, fixture blocks, side plates, plenum, and collets



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