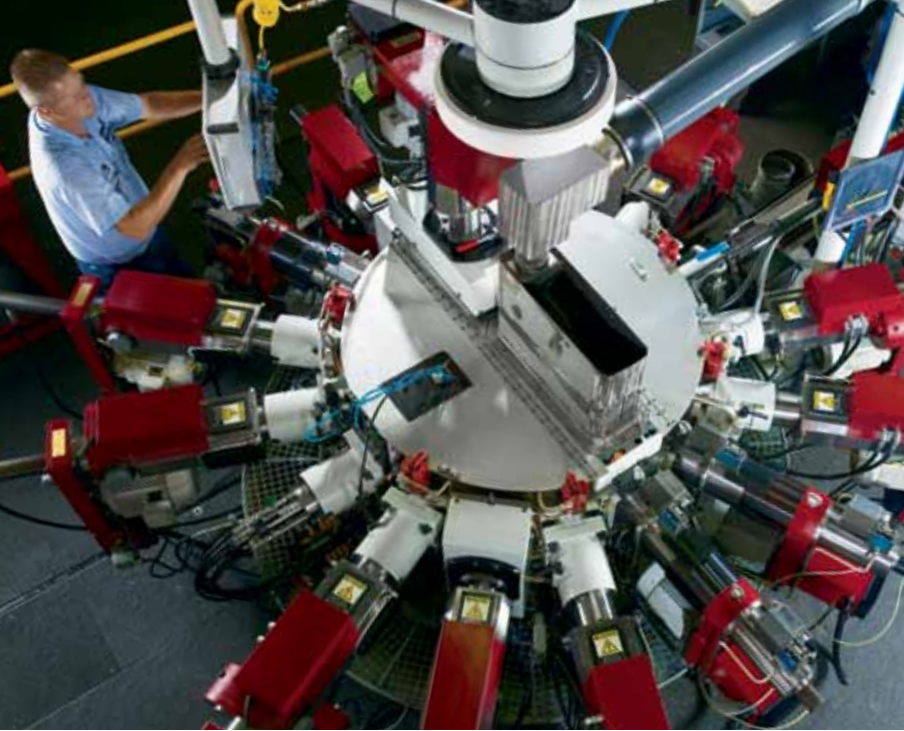


# A Quick Look at Fluid System Solutions





## Who We Are

**S**wagelok Company is a major developer and provider of fluid system solutions, including products, assemblies, and services for the research, instrumentation, pharmaceutical, oil and gas, power, petrochemical, alternative fuels, and semiconductor industries. Our manufacturing, research, technical support, and distribution facilities support a global network of more than 200 authorized sales and service centers in 70 countries.

## People Behind the Product

Our highly educated team of metallurgists, polymer scientists, chemical engineers, and physicists are supported with state-of-the-art laboratories to ensure you receive the highest levels of quality, reliability, and performance in every Swagelok® product.

We are dedicated to understanding customer challenges and meeting them with new product development, continued refinement and adaptation of existing products, engineered-to-order products, custom configurations, subassemblies, and more.

Swagelok Company currently has over 400 patents in force and pending worldwide.

We employ proactive process control in the manufacturing of our products. This prevention-based quality management, combined with our stringent material selection processes and the high expectations to which we hold our suppliers, provides you the assurance that our products will meet your expectations for reliable performance and quality.



## Swagelok Custom Solutions

Tap into the full capabilities that Swagelok has to offer: 65 years' experience in fluid systems solutions, deep industry expertise, and the ability to deliver consistent, high-quality assemblies globally. Your authorized Swagelok representative can work with you to create anything from simple to very complex assemblies.

## Swagelok Energy Advisors

Swagelok Energy Advisors (SEA) is your full-service provider for optimizing energy system performance. Services include steam and condensate system training, steam system evaluation, steam system roadmap implementation, a steam trap test station management program, and ultrasonic leak detection for compressed air systems.

## Swagelok Pre-Engineered Subsystems

Swagelok offers a 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. Your authorized Swagelok representative can help you select Swagelok pre-engineered subsystems to create fully documented fluid sampling and control systems.

## Applications Support

Whether you are an original equipment manufacturer or responsible for optimizing the daily maintenance, repair, and operation of your facility, you can count on us for knowledgeable support with technical information, product selection, and fluid system design.

## eBusiness

Research, specify, and purchase Swagelok fluid system components in local language and currency.

- eCommerce and EDI
- CAD Templates
- Sales Drawings
- Configuration Tools and Calculators
- Multilingual Literature and Catalogs
- Online Quoting and Ordering

## Training and Education

Improve the overall safety of the work environment, increase productivity, and keep abreast of the latest fluid system technologies with our comprehensive customer training and education programs.

Swagelok Company's  
expanding portfolio  
of products,  
assemblies, and  
services helps you  
solve your fluid  
system problems.

**Swagelok**  
Value beyond the expected™



## Tube Fittings and Tools

- Available in tube sizes 1/16 to 2 in. and 2 to 50 mm
- Consistent gaugeability upon initial installation
- Easy to disassemble and reassemble
- Wide variety of materials and configurations
- Manual and hydraulic swagers; gauges, wrenches

*Patented Design:* Excellent gas-tight sealing and tube-gripping action, easily achieved proper installation, consistent reassembly, excellent vibration fatigue resistance and tube support, full compatibility with original Swagelok stainless steel tube fittings of identical sizes.



## Instrumentation Valves

- Variety of end connections including integral Swagelok tube fittings
- Broad operating temperature range
- Large selection of sizes and materials
- Minimal dead volume and entrapment zones

*Types:* Ball, Needle, Check, Relief, Plug, Metering, Toggle, Manifold, Bleed and Purge



## General Industrial Fittings

- Available in sizes 1/16 to 2 in. and 2 to 50 mm
- Wide variety of materials and configurations
- Pressures from vacuum to 60 000 psi (4134 bar)
- NPT, ISO/BSP, and SAE threads

*Types:* Pipe, Weld, Vacuum, Flange, Medium-Pressure



## High-Purity Fittings

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

*Types:* VCR® Face Seal, VCO® Face Seal, Micro-Fit®, Weld, TS Biopharm Ferrules and Caps



## Process Valves and Manifolds

- 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



## Packless Valves

- High cycle, high-integrity sealing
- Low- and high-pressure models available
- All metal containment in metal valves
- Shutoff, bulk-gas distribution, and isolation service
- High-purity stainless steels and PFA materials

*Types:* Bellows-Sealed, Diaphragm-Sealed, Radial Diaphragm-Sealed



## Regulators

- Instrumentation-grade and ultrahigh-purity models
- Unique design features such as metal-to-metal seal to atmosphere
- Spring-, dome-, and air loading
- Self-vent and captured-vent options

*Types:* Diaphragm Sensing, Piston Sensing, Pressure Reducing, Back Pressure, Vaporizing, Ultrahigh-Purity, Modular



## Tubing, Tools, Accessories

- Stainless steel tubing
- Sizes from 1/16 to 4 in. OD and 3 to 25 mm OD
- Standard instrumentation and ultrahigh-purity tubing
- Tube benders and tube preparation tools
- Tube support system for tube and hose sizes 1/4 to 1 in. and 6 to 25 mm

*Types:* Chemically Cleaned and Passivated Tubing, Ultrahigh-Purity Stainless Steel Tubing, Medium-Pressure Heavy-Walled Annealed Tubing, Insulated and Jacketed Tubing, Preinsulated Tubing Bundles



## Measurement Devices

- 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



## Hose and Flexible Tubing

- 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



## Filters

- Available for liquid and gas service
- Welded, inline, and tee-type configurations
- Wide variety of filter media available
- Membralox® ceramic filtering technology for high-purity applications

*Types:* Coalescing, Particulate, High-Purity



## Sample Cylinders

- 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



## Miniature Modular Systems

- O-ring and metal-to-metal sealing technologies suitable for instrumentation and ultrahigh-purity applications
- Compact footprint
- Lightweight, easy-to-assemble
- Wide variety of surface-mount components available

*Types:* Analytical MPC, Ultrahigh-Purity, IGCI, Modular Components, Configuration Software, System Assembly



## Leak Detectors, Lubricants, Sealants

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



## Quick-Connects

- Designed to minimize spillage and air inclusion
- Push-to-connect design enables quick, simple operation. No twisting, turning, or wrenching necessary
- Wide variety of configurations, end connections, and stem and body connectors

*Types:* Instrumentation, Single-End Shutoff, Double-End Shutoff, Full-Flow, Miniature, PTFE-Sealed



## Welding System

- Cost effective and reliable gas tungsten arc welds
- Lightweight, portable power supply
- Meets ASME-BPE welding standards

*Types and Accessories:* Traditional and High-Purity Power Supplies, Weld Heads, Fixture Blocks, Side Plates, Plenum, and Collets

## Global System/Product Approvals and Certifications

■ ISO 9001 Quality System ■ ISO 14001 Environmental Management System ■ Vd TÜV ■ ASME N and NPT Certificates ■ European Pressure Equipment Directive (PED) ■ METI/KHK ■ Det Norske Veritas (DNV) ■ Nippon Kaiji Kyokai (NK) ■ American Bureau of Shipping (ABS) ■ Lloyd's Register (LR) ■ United States Department of the Navy ■ ECE R110 and NGV 3.1/4.6 ■ 3A Certifications ■ Canadian Registration Numbers (CRNs) ■ Chinese Compulsory Certificates (CCC) ■ European Transportable Pressure Equipment Directives (TPED) ■ Transport Canada (TC) ■ U.S. Department of Transportation (DOT) ■ GOST R and RTN



## Global Availability/Local Service

Algeria	Denmark	Libya	Slovakia
Angola	Egypt	Malaysia	South Africa
Argentina	England	Mexico	Spain
Australia	Finland	Morocco	Sweden
Austria	France	New Zealand	Switzerland
Azerbaijan	Germany	Nigeria	Taiwan
Belgium	Hong Kong	Norway	Thailand
Bolivia	Hungary	Peru	The Netherlands
Brazil	India	Philippines	Tunisia
Brunei	Indonesia	Poland	Turkey
Canada	Ireland	Portugal	United States
Chile	Israel	Puerto Rico	Vietnam
China	Italy	Russia	
Colombia	Japan	Scotland	
Czech Republic	Korea	Singapore	

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