

# Opportunities for Submarines: Achieve Enhanced Safety and Reliability

Fluid System Solutions for Submarines



Swagelok®

Swagelok Eastern New York | Western New England

## Table of Contents

**Total Support** \_\_\_\_\_ **03**

### **Regulators**

Swagelok® K Series Pressure Regulators \_\_\_\_\_ **11**

### **Valves**

Swagelok® GB Series General Purpose Ball Valve \_\_\_\_\_ **12**

Swagelok® 60 Series Three-Piece Process

Instrumentation Ball Valves \_\_\_\_\_ **13**

Swagelok® 83 Series Three-Piece Trunion-Style Ball Valves \_\_\_\_\_ **14**

Swagelok® FKB Series Ball Valves \_\_\_\_\_ **15**

Swagelok® N Series Severe-Service Needle Valves \_\_\_\_\_ **16**

Swagelok® Integral-Bonnet Needle Valves (O, 1, 18 Series) \_\_\_\_\_ **17**

Swagelok® CH Series Check Valves \_\_\_\_\_ **18**

### **Tube Fittings**

Alloy 625 Swagelok® Tube Fittings \_\_\_\_\_ **19**

Alloy 400 Swagelok® Tube Fittings \_\_\_\_\_ **19**

Swagelok® FK Series Fittings \_\_\_\_\_ **23**

### **Flange Adapters**

Swagelok® Flange Adapters \_\_\_\_\_ **24**

### **Quick-Connects**

Swagelok® QC Series Quick-Connects \_\_\_\_\_ **25**

### **Gauges**

Swagelok® Pressure Gauges \_\_\_\_\_ **26**



## How Swagelok Interacts with the Submarine Supply Chain

### Builder

Swagelok works with builders to ensure our products comply with the operator's specifications. By providing a single source of products, along with standardized training and technical support, we help submarine builders deliver flawless execution.

### Integration

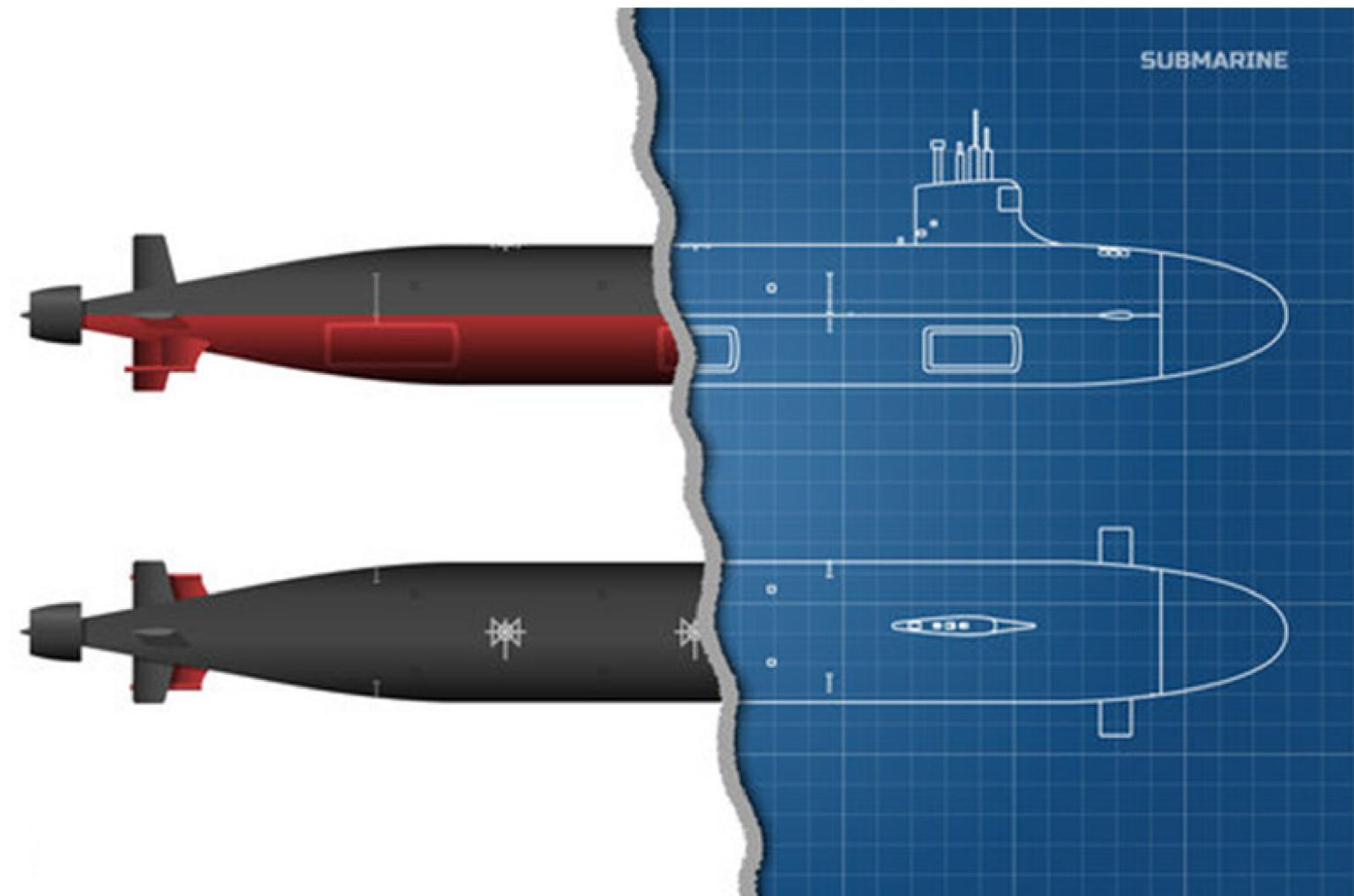
Our local specialists have a deep understanding of your needs and application requirements, and are backed by a global team of experts. Only Swagelok offers comprehensive project management support and global resources to provide holistic support for international construction projects involving industrial fluid systems.

### Owner / Operator

Owner/operators need global resources, availability, and long-term support to go along with standardized product requirements. Swagelok's global presence, breadth of products and production volume help maximize uptime and improve safety—all while controlling costs and mitigating environmental risks.

### Package Vendors

Swagelok provides accurate and timely delivery of products and services to package vendors to keep projects on time. Coupled with training and onsite services, we can provide you what you need when you need it—anywhere in the world.



## Swagelok Solutions Materials Excellence

Corrosion can cause significant problems in marine environments. We are ready and equipped to help you select the right combination of materials to keep your systems running safely and smoothly for longer.

Our proprietary quality controls help every part meet the **demanding needs of your application**. We source all component materials from select vendors with quality standards that are checked continuously and consistently for every part we make.

Swagelok® 316/316L stainless steel tube fittings and instrumentation valves contain **more nickel and chromium than required by ASTM standards** for bars and forgings, granting our components higher resistance to localized corrosion.

Special coatings and treatments are available, including jacketed tube, SilcoNert® coatings, electropolished finishes, heat tracing, and more.

Engineered combinations—combining 316/316L fittings with other high-grade alloys into fully rated assemblies—can deliver the **corrosion resistance you need in a cost-effective manner**.



## *Swagelok Solutions* Design and Assembly Services

Swagelok® Custom Solutions creates fabricated assemblies and packages that range from systems with just a few components to full panels and enclosures. Reduce labor costs, cut down lead times to finished package construction, and reduce waste via Swagelok-controlled assembly.

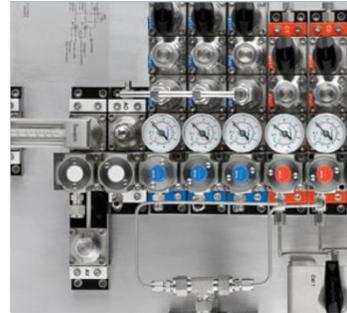
Benefits include:

- Enhanced operational safety
- Minimized onsite work and assembly
- A predictable build schedule
- Engineering compliance and documentation, including CAD and P&ID
- Zero rework required for critical assemblies
- Designs can include a range of client-specified OEM products

Our approach is collaborative. Whether you need Factory Acceptance Tests, quality documentation, electrical installation, or assembly anywhere in the world, we work closely with you to understand your needs. We can optimize your existing designs, provide configurable “off-the-shelf” designs, make specialized systems, or fully customize your build.

All packages are assembled, tested, and delivered with the backing of Swagelok’s Limited Lifetime Warranty.





### Custom Solutions

If you're short on manpower, Swagelok can fabricate, assemble, and test your fluid system assemblies for you. Whether you need a small assembly with a few components or a complete panel or enclosure, our team of experts is here to help. Swagelok® Custom Solutions not only include our high-quality fluid-system components, but also can incorporate wiring, automation, transmitters, relays, pumps, and more.

➤ [Learn more](#) about how we can help improve your operations with our reliably designed and constructed fluid system assemblies.

### Grab Sampling Systems

Safely capture representative samples of liquid or gas from your process lines with a Swagelok® grab sampling system. We offer a variety of system configurations to meet the unique needs of your application. Our closed-loop sampling systems deliver pressurized samples into pressure-rated cylinders, while liquid grab sampling systems allow you to collect process fluid into glass laboratory bottles for analysis. Every Swagelok sampling panel is safe, intuitive, easy to maintain, and can be ordered as a single part number.

### Gas Distribution Systems

When you need to deliver gases from a high-pressure source, Swagelok can design and assemble a gas delivery system that's right for you. We offer four types of modular gas distribution systems: Swagelok® source inlet, Swagelok® gas panel, Swagelok® changeover, and Swagelok® point-of-use. Each is built with specific pressure regulation in mind, enabling you to deliver gases at your application's specified pressure and flow rate. Our gas delivery systems can be ordered as a standard solution or customized to meet your project requirements.

### Instrument Panels

Control panels play an important role in both efficient production and submarine safety. Reliable assembly and design knowledge are required for panel performance and longevity. We can build stainless steel or aluminum panels with any variation of components (Regulators, Gauges, Valves, Flowmeters, etc) and any size that is needed. We can offer quality products to help ensure these systems achieve the performance they demand.

### Hydraulic Power Plants

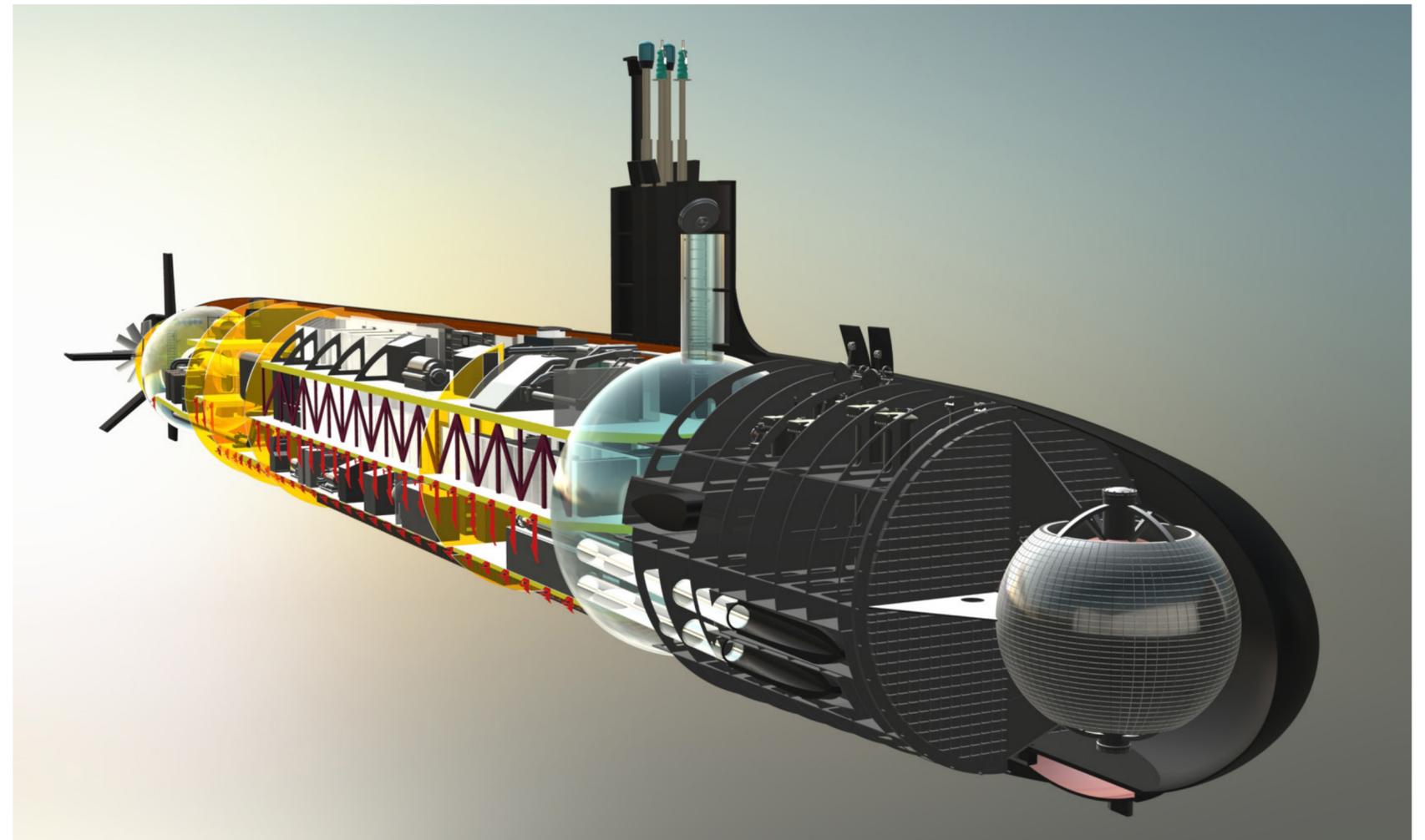
Hydraulic power plants provide power to various components boat wide, including sea system hull and back up valves, torpedo tube operations, and steering and diving systems. Hydraulic power plant downtime can shut down these systems and cause significant safety and operational impacts. Hydraulic power plants are complex pieces of equipment comprised of various pumps, motors, accumulators, instrumentation panels, valves, tubes, and tube fittings that must all work together harmoniously. We can provide quality products, custom solutions, and project support.



## Application Focus Auxiliary Systems

Looking for assistance with additional packages and applications?  
We can deliver quality components and solutions for all of the following systems:

- Inlet 3-phase separation
- Nitrogen system
- Sea water and cooling medium systems
- Heating medium system
- Demineralized water system
- Main power generation system
- HP air dew-pointing
- CO<sub>2</sub> removal
- Export gas compression and metering
- Condensate treating
- Condensate stabilization
- Fuel gas compression
- Drain and vent systems
- Close drain system
- Open drain system
- Diesel oil system
- Lubricating oil system
- Cooling water system
- Potable and fresh water systems
- Grey and black water systems
- Bilge system
- Exhaust gas system
- Condensate system
- Slop water system
- Ballast system
- Hull HVAC system



## Total Support Training and Support

Properly trained and certified teams are highly beneficial in the rapidly evolving shipbuilding industry. A well-trained team can contribute to safely operating, properly designed, and leak-tight systems.

Whether your personnel are designing, installing, or maintaining critical fluid systems, we offer a variety of training opportunities that can help you stay on schedule, minimize rework, improve performance and design, and enhance safety across your assets.

Our experienced trainers are well-versed in applicable trends, systems, processes, markets, regulations, and industry best practices. We can provide valuable education on use of tools, installation techniques, and safety protocols. Our courses combine classroom and virtual learning with practical, hands-on activities. Training can be conducted from our facilities, onsite at your facility, or remotely via virtual training platforms.



Opportunities include:

- Essentials training
- Tube fitting installation
- Tube fitting inspection
- Tube bending
- Orbital welding
- Cone and thread installation (for medium- and high-pressure systems)
- Valve essentials
- Regulator essentials
- Materials science
- Sampling system maintenance and design

## Total Support Global Distribution Network

With Swagelok, you get global reach with localized support. That means wherever you are operating, we are positioned to support your success with:

- Local associates who have a deep understanding of your business needs and application requirements
- Locally stocked inventory and personalized onsite support and services, from component selection and design help to fluid system evaluations and recommendations on installation practices and system enhancements
- Associates who know the culture, speak the language, and understand regional needs
- Access to manufacturing, field engineering, technical services, logistical support, and specialized expertise to assist you

Local specialists are backed by a global team of experts, ensuring you receive the recommendations you need to improve the performance, productivity, reliability, and safety of your fluid systems—all while controlling costs and mitigating environmental risks.

Our global distribution network spans more than **70 countries** with more than **200 sales and service centers, 20 manufacturing facilities, five global tech centers**, and **9400 associates**—ensuring you have the products and support when and where you need it.



## Total Support Traceability and Quality Control

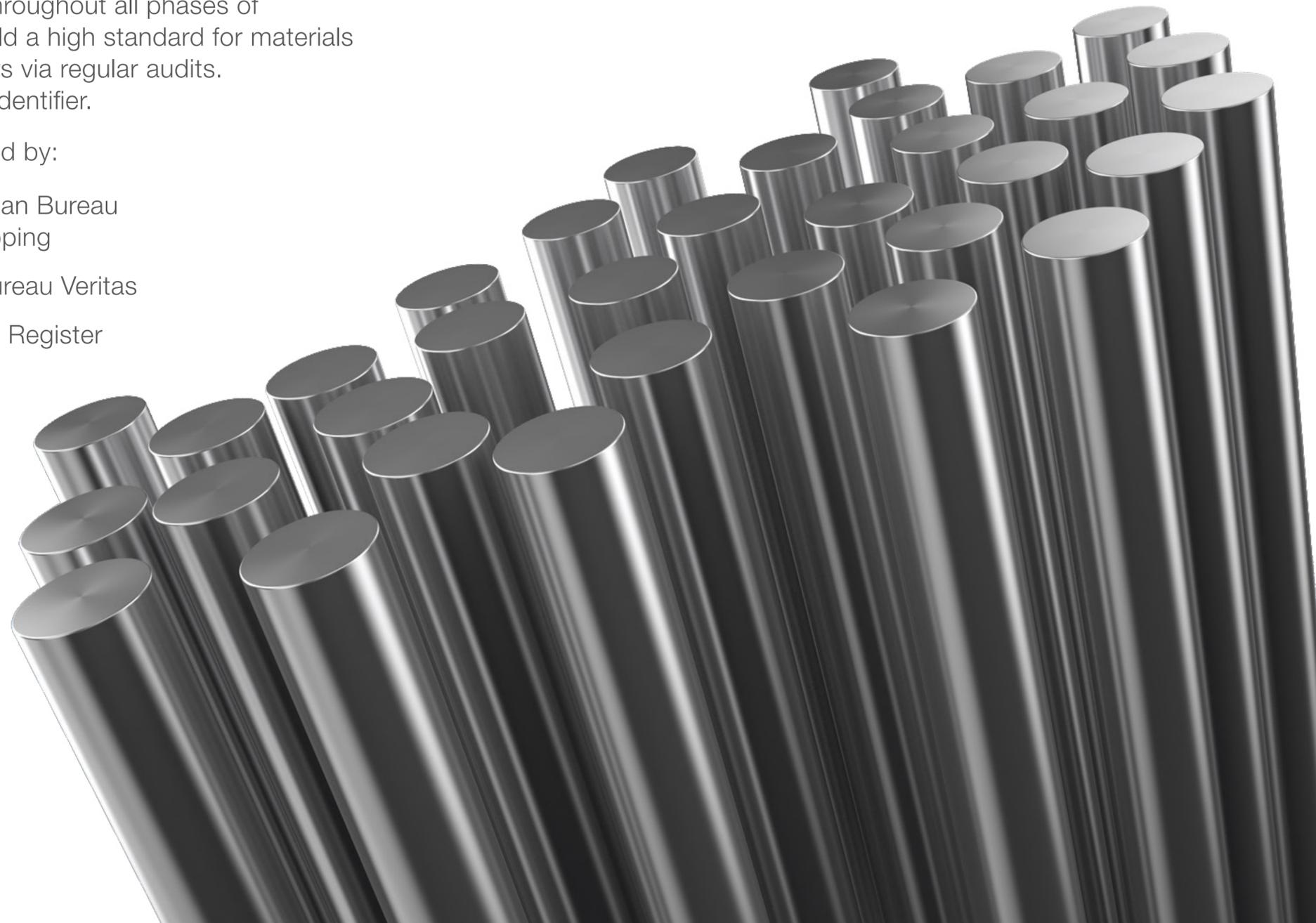
Raw material traceability is an integral part of our overall quality system throughout all phases of material receipt, manufacturing, processing, storage, and delivery. We hold a high standard for materials composition and ensure compliance from all of our raw materials suppliers via regular audits. All fittings are marked with the Swagelok name, material type, and trace identifier.

The quality system our fittings are manufactured under has been approved by:

- ISO 9001:2000
- UN/ECE R110
- METI/KHK
- NAVSEA
- CSA NGV 3.1 and 4.6
- ASME N and NPT
- The U.S. Navy
- DNV GL  
(Det Norske Veritas)
- American Bureau of Shipping
- The Bureau Veritas
- Lloyd's Register

### A Promise as Strong as Our Products

The Swagelok Limited Lifetime Warranty demonstrates our relentless commitment to quality and our customers. Every Swagelok® product is backed by this promise for the life of the product, so you can rest assured that your fluid system investment is protected.



## Swagelok® K Series Pressure Regulators

Swagelok® pressure regulators provide the consistent, accurate, and lasting performance industrial professionals need to operate fluid systems safely, reliably, and cost-effectively.

### These valves include:

- Back-pressure and pressure-reducing models
- Gas cylinder changeover model

Refer to our [K Series Pressure Regulator web page](#) for product ratings, materials of construction, dimensions, and additional information.

Series	Description	Ordering Number
<b>KBP (back pressure)</b>	Stainless steel back-pressure regulator, 0 to 250 psig (17.2 bar), A configuration, FKM seat, 1/4 in. female NPT, 0.20 Cv	<a href="#">KBP1G0A4A5A20000</a>
	Stainless steel back-pressure regulator, 0 to 100 psig (6.8 bar), D configuration, FKM seat, 1/4 in. female NPT, 0.20 Cv	<a href="#">KBP1F0D4A5A20000</a>
	Stainless steel back-pressure regulator, 0 to 500 psig (34.4 bar), A configuration, FKM seat, 1/4 in. female NPT, 0.20 Cv	<a href="#">KBP1J0A4A5A20000</a>
<b>KPR (pressure reducing)</b>	Stainless steel pressure-reducing regulator, 0 to 100 psig (6.8 bar), 500 psig (34.4 bar) inlet, C configuration, PCTFE seat, 1/4 in. female NPT, 0.06 Cv	<a href="#">KPR1FJC412A20000</a>
	Stainless steel pressure-reducing regulator, 0 to 25 psig (1.7 bar), 100 psig (6.8 bar) inlet, C configuration, PCTFE seat, 1/4 in. female NPT, 0.06 Cv	<a href="#">KPR1DFC412A20000</a>
	Stainless steel pressure-reducing regulator, 0 to 100 psig (6.8 bar), 3600 psig (248 bar) inlet, F configuration, PCTFE seat, 1/4 in. female NPT, 0.06 Cv	<a href="#">KPR1FRF412A20000</a>
	Stainless steel pressure-reducing regulator, 0 to 250 psig (17.2 bar), 3600 psig (248 bar) inlet, F configuration, PCTFE seat, 1/4 in. female NPT, 0.06 Cv	<a href="#">KPR1GRF412A20000</a>
	Stainless steel pressure-reducing regulator, 0 to 100 psig (6.8 bar), 500 psig (34.4 bar) inlet, F configuration, PCTFE seat, 1/4 in. female NPT, 0.06 Cv	<a href="#">KPR1FJF412A20000</a>
	Stainless steel 2-stage pressure-reducing regulator, 0 to 50 psig (3.4 bar), F configuration, PCTFE seat 1/4 in. female NPT, 0.06 Cv	<a href="#">KCY1ERF412A20000</a>
<b>KCY (two-stage)</b>	Stainless steel 2-stage pressure-reducing regulator, 0 to 100 psig (6.8 bar), F configuration, PCTFE seat, 1/4 in. female NPT, 0.06 Cv	<a href="#">KCY1FRF412A20000</a>



Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.

## Swagelok® Ball Valves

Ball valves can be used to control system flow in a variety of capital project applications ranging from general purpose to alternative fuel service to control system flow. Swagelok ball valves can be manufactured or configured to a wide range of specifications.

### Swagelok® GB Series General Purpose Ball Valve

The GB series full-bore, full-flow general purpose ball valve offers industry-leading performance in applications including hydraulic, injection, fire suppression systems, isolation for compressed natural gas (CNG) vehicle infrastructure, and in highly corrosive alkylation operations. The GB series ball valve provides value by reducing the time and cost required to install and verify the performance of components used in high-flow industrial applications.

**These valves feature:**

- Working pressures up to 6000 psig (413 bar) with temperatures from -40° to 250°F (-40° to 121°C)
- Mechanically locked end screw design (patent pending) to provide increased safety
- Optional API 607 certification for fire-safe applications and NACE MR0175/ISO 15156 certification for sour gas

Refer to our [GB Series Ball Valve web page](#) for product ratings, materials of construction, dimensions, and additional information.



Configuration	Description	Ordering Number
<b>8GB valve with 1/2 in. bore</b>	Stainless steel 8GB valve, 1/2 in. Swagelok tube fittings	<a href="#">SS-8GBS8</a>
	Stainless steel 8GB valve, 3/4 in. Swagelok tube fittings	<a href="#">SS-8GBS12</a>
<b>16GB valve with 7/8 in. bore</b>	Stainless steel 16GB valve, 3/4 in. Swagelok tube fittings	<a href="#">SS-16GBS12</a>
	Stainless steel 16GB valve, 1 in. Swagelok tube fittings	<a href="#">SS-16GBS16</a>

Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.



## Swagelok® 60 Series Three-Piece Process Instrumentation Ball Valves

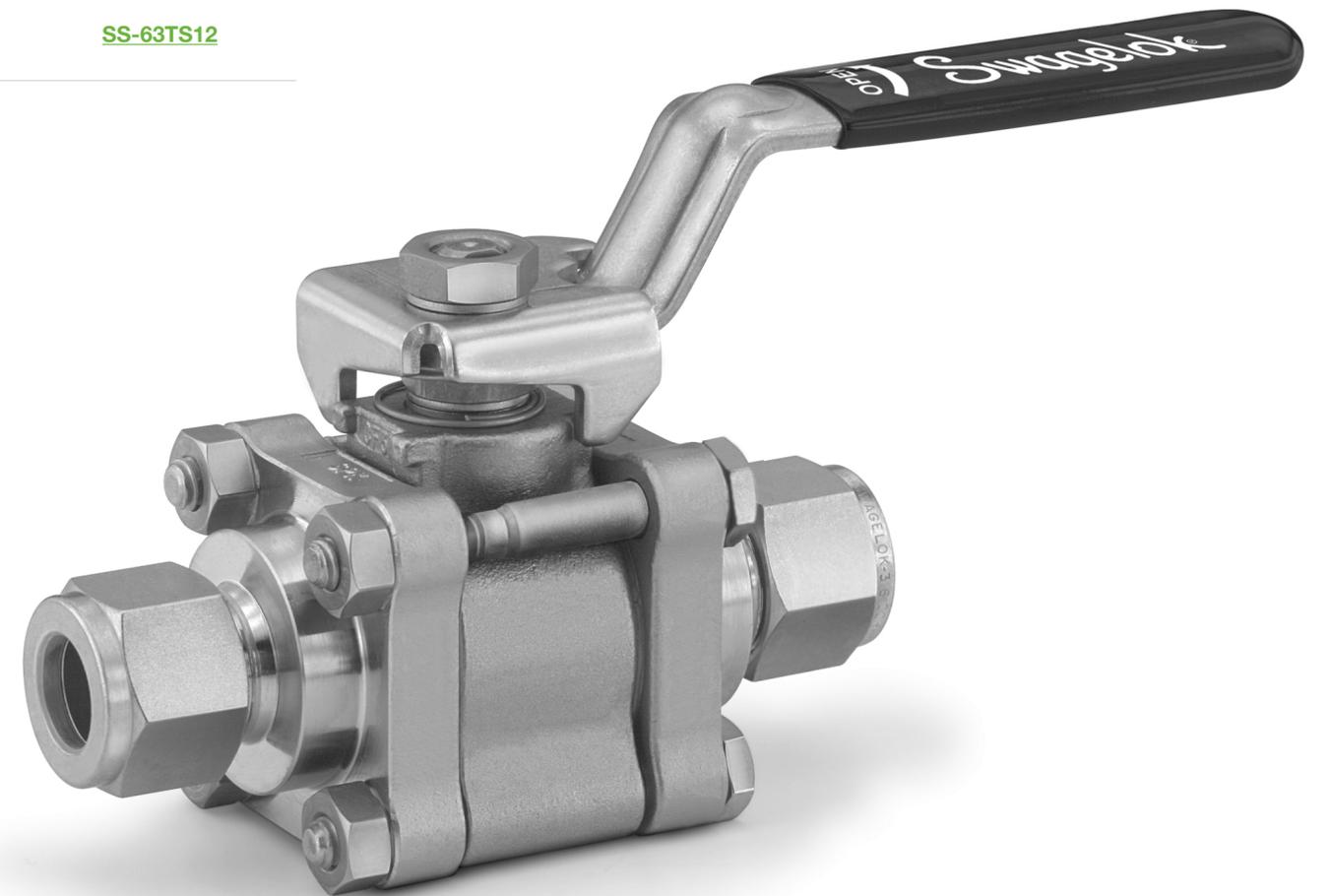
With a coned-disc, spring-loaded seat; live-loaded, two-piece chevron stem packing; and three-piece, swing-out design, our 60 series three-piece process instrumentation ball valves are designed for reliability and low maintenance.

### These valves feature:

- Quarter-turn actuation
- Wide selection of seat materials
- Pneumatic and electric actuators
- Optional vent porting
- Available low emissions certification per API 641

Refer to our [60 Series Ball Valve web page](#) for product ratings, materials of construction, dimensions, and additional information.

Series	Description	Ordering Number
62	Stainless steel 3-piece 60 series ball valve, reinforced PTFE seats, 1/4 in. Swagelok tube fitting	<a href="#">SS-62TS4</a>
	Stainless steel 3-piece 60 series ball valve, reinforced PTFE seats, 3/8 in. Swagelok tube fitting	<a href="#">SS-62TS6</a>
63	Stainless steel 3-piece 60 series ball valve, reinforced PTFE seats, 1/2 in. Swagelok tube fitting	<a href="#">SS-63TS8</a>
	Stainless steel 3-piece 60 series ball valve, reinforced PTFE seats, 3/4 in. Swagelok tube fitting	<a href="#">SS-63TS12</a>



Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.

## Swagelok® 83 Series Three-Piece Trunnion-Style Ball Valves

Our trunnion-style 83 series ball valves provide durable service in high- and low-pressure applications. They feature a compact, maximum-flow design, low operating torque, wide temperature range, and can be ordered with ECE R110-type approval.

### These valves feature:

- Compact, maximum-flow design
- Two- or three-way flow patterns
- Panel mounting

Refer to our [83 Series Ball Valve web page](#) for product ratings, materials of construction, dimensions, and additional information.

Series	Description	Ordering Number
83	Stainless steel 3-piece trunnion-style ball valve, PCTFE seats, 2-way straight pattern, 1/4 in. Swagelok tube fitting	<a href="#">SS-83KS4</a>
	Stainless steel 3-piece trunnion-style ball valve, PCTFE seats, 2-way straight pattern, 3/8 in. Swagelok tube fitting	<a href="#">SS-83KS6</a>
	Stainless steel 3-piece trunnion-style ball valve, PCTFE seats, 2-way straight pattern, 1/2 in. Swagelok tube fitting	<a href="#">SS-83KS8</a>
	Stainless steel 3-piece trunnion-style ball valve, PCTFE seats, 3-way switching, 1/4 in. Swagelok tube fitting	<a href="#">SS-83XKS4</a>
	Stainless steel 3-piece trunnion-style ball valve, PCTFE seats, 3-way switching, 3/8 in. Swagelok tube fitting	<a href="#">SS-83XKS6</a>
	Stainless steel 3-piece trunnion-style ball valve, PCTFE seats, 3-way switching, 1/2 in. Swagelok tube fitting	<a href="#">SS-83XKS8</a>



Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.



## Swagelok® FKB Series Ball Valves

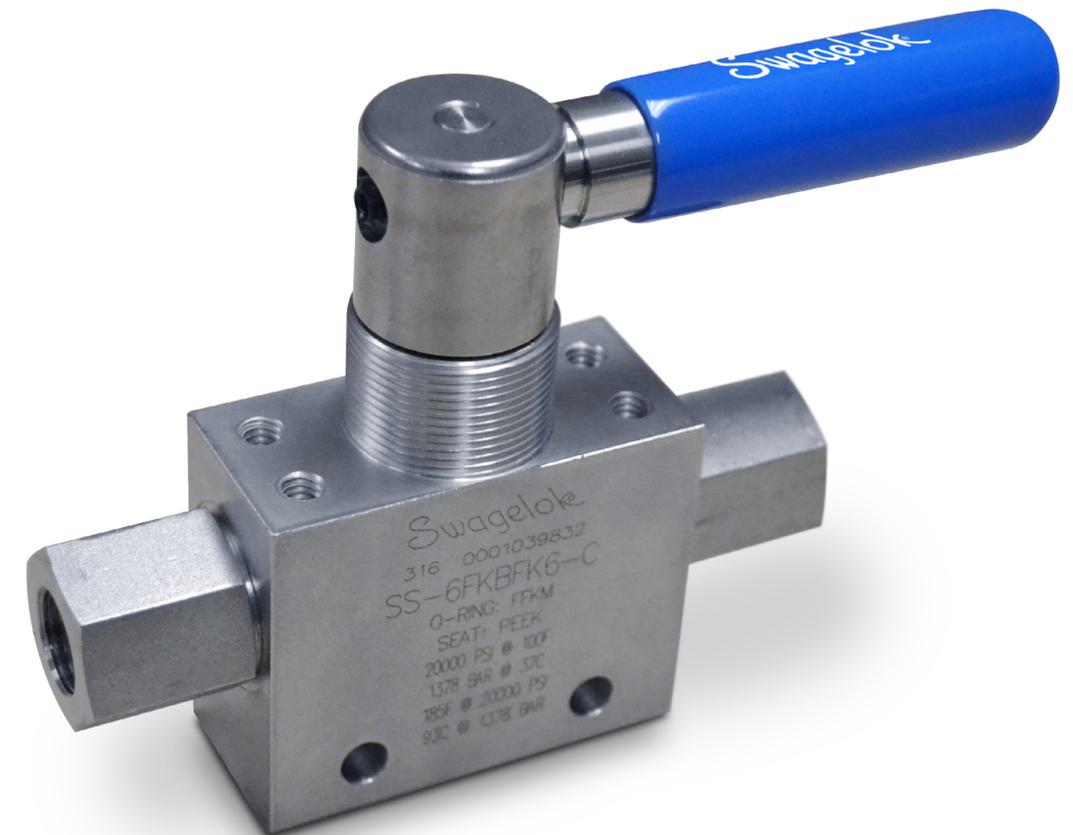
Swagelok® medium-pressure ball valves provide positive shutoff in applications up to 20 000 psig (1378 bar) and feature an advanced design that reduces seal wear, improving reliability.

### These valves include:

- Low-torque, quarter-turn operation in a compact design
- Flow coefficients (Cv) from 0.44 to 11.3
- ISO 5211-compliant pneumatic actuators

Refer to our [FKB Series web page](#) for product ratings, materials of construction, dimensions, and additional information.

Series	Description	Ordering Number
6FKB	Stainless Steel Medium-Pressure (20 000 psig [1378 bar]) Ball Valve, PEEK Seats, 1/4 in. Medium-Pressure Tube Fitting, 0.209 in. (5.31 mm) Orifice	<a href="#">SS-6FKBFK4</a>
	Stainless Steel Medium-Pressure (20 000 psig [1378 bar]) Ball Valve, PEEK Seats, 3/8 in. Medium-Pressure Tube Fitting, 0.209 in. (5.31 mm) Orifice	<a href="#">SS-6FKBFK4</a>
	Stainless Steel Medium-Pressure (20 000 psig [1378 bar]) Ball Valve, PEEK Seats, 1/2 in. Medium-Pressure Tube Fitting, 0.209 in. (5.31 mm) Orifice	<a href="#">SS-6FKBFK8</a>
	Stainless Steel Medium-Pressure (20 000 psig [1378 bar]) Ball Valve, PEEK Seats, 1/4 in. Medium-Pressure Tube Fitting, 0.209 in. (5.31 mm) Orifice, 3-Way Switching	<a href="#">SS-6FKBXFK4</a>
	Stainless Steel Medium-Pressure (20 000 psig [1378 bar]) Ball Valve, PEEK Seats, 3/8 in. Medium-Pressure Tube Fitting, 0.209 in. (5.31 mm) Orifice, 3-Way Switching	<a href="#">SS-6FKBXFK6</a>
	Stainless Steel Medium-Pressure (20 000 psig [1378 bar]) Ball Valve, PEEK Seats, 1/2 in. Medium-Pressure Tube Fitting, 0.209 in. (5.31 mm) Orifice, 3-Way Switching	<a href="#">SS-6FKBXFK8</a>



Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.

## Swagelok® Needle Valves

Needle valves provide reliable flow control for a range of applications using a variety of stem designs, flow patterns, materials, and end connections in designs such as integral-bonnet and union-bonnet.

### Swagelok® N Series Severe-Service Needle Valves

Needle valves with union-bonnet construction are available in a variety of materials, with working pressures up to 10 000 psig (689 bar) and temperatures up to 1200°F (648°C).

**These valves feature:**

- Available low emissions certification per API 641

Refer to our [N Series Severe-Service Union-Bonnet Needle Valve web page](#) for product ratings, materials of construction, dimensions, and additional information.

Series	Description	Ordering Number
3N	Stainless steel severe-service union bonnet needle valve, 0.35 Cv, 1/4 in. Swagelok tube fitting, ball stem	<a href="#">SS-3NBS4</a>
	Stainless steel severe-service union bonnet needle valve, 0.35 Cv, 1/4 in. Swagelok tube fitting, regulating stem	<a href="#">SS-3NRS4</a>
6N	Stainless steel severe-service union bonnet needle valve, 0.86 Cv, 3/8 in. Swagelok tube fitting, ball stem	<a href="#">SS-6NBS6</a>
	Stainless steel severe-service union bonnet needle valve, 0.86 Cv, 1/2 in. Swagelok tube fitting, ball stem	<a href="#">SS-6NBS8</a>
	Stainless steel severe-service union bonnet needle valve, 0.86 Cv, 1/2 in. Swagelok tube fitting, regulating stem	<a href="#">SS-6NRS8</a>
	Stainless steel severe-service union bonnet needle valve, 2.1 Cv, 1/2 in. Swagelok tube fitting, ball stem	<a href="#">SS-12NBS8</a>
12N	Stainless steel severe-service union bonnet needle valve, 2.4 Cv, 3/4 in. Swagelok tube fitting, ball stem	<a href="#">SS-12NBS12</a>
	Stainless steel severe-service union bonnet needle valve, 2.4 Cv, 1 in. Swagelok tube fitting, ball stem	<a href="#">SS-12NBS16</a>
	Stainless steel severe-service union bonnet needle valve, 2.1 Cv, 1/2 in. Swagelok tube fitting, regulating stem	<a href="#">SS-12NRS8</a>
	Stainless steel severe-service union bonnet needle valve, 2.4 Cv, 3/4 in. Swagelok tube fitting, regulating stem	<a href="#">SS-12NRS12</a>
	Stainless steel severe-service union bonnet needle valve, 2.1 Cv, 1/2 in. Swagelok tube fitting, ball stem	<a href="#">SS-12NBS8</a>
	Stainless steel severe-service union bonnet needle valve, 2.4 Cv, 3/4 in. Swagelok tube fitting, regulating stem	<a href="#">SS-12NRS12</a>



Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.



## Swagelok® Integral-Bonnet Needle Valves (0, 1, 18 Series)

Integral-bonnet needle valves are compact needle valves available in a full range of sizes, configurations, and materials for a variety of applications.

### These valves feature:

- Live-loaded packing system
- Compact design
- Working pressures up to 6000 psig (413 bar)
- Temperatures up to 600°F (315°C)

Refer to our [Integral-Bonnet Needle Valves web page](#) for product ratings, materials of construction, dimensions, and additional information.

Series	Description	Ordering Number
0	Stainless steel integral-bonnet needle valve, 0.09 Cv, 1/8 in. Swagelok tube fitting, regulating stem	<a href="#">SS-ORS2</a>
	Stainless steel integral-bonnet needle valve, 0.37 Cv, 1/4 in. Swagelok tube fitting, regulating stem	<a href="#">SS-1RS4</a>
1	Stainless steel integral-bonnet needle valve, 0.73 Cv, 3/8 in. Swagelok tube fitting, regulating stem	<a href="#">SS-1RS6</a>
	Stainless steel integral-bonnet needle valve, 0.73 Cv, 1/2 in. Swagelok tube fitting, regulating stem	<a href="#">SS-1RS8</a>
18	Stainless steel integral-bonnet needle valve, 1.80 Cv, 1/2 in. Swagelok tube fitting, regulating stem	<a href="#">SS-18RS8</a>
	Stainless steel integral-bonnet needle valve, 1.80 Cv, 3/4 in. Swagelok tube fitting, regulating stem	<a href="#">SS-18RS12</a>



Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.

## Swagelok® CH Series Check Valves

Control back flow in general-service applications with our CH series check valves available in a range of adjustable and fixed cracking pressures.

### These valves feature:

- Working pressures up to 6000 psig (413 bar)
- Adjustable and fixed cracking pressures
- A variety of end connections
- 316 stainless steel and brass materials

Refer to our [Check Valve web page](#) for product ratings, materials of construction, dimensions, and additional information.



Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.

End Connection Size	Description	Ordering Number
1/8 in.	Stainless steel poppet 6000 psig (413 bar) check valve, 1/8 in. Swagelok tube fitting, 1/3 psig (0.03 bar)	<a href="#">SS-CHS2-1/3</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 1/8 in. Swagelok tube fitting, 1 psig (0.07 bar)	<a href="#">SS-CHS2-1</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 1/8 in. Swagelok tube fitting, 5 psig (0.35 bar)	<a href="#">SS-CHS2-5</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 1/8 in. Swagelok tube fitting, 10 psig (0.69 bar)	<a href="#">SS-CHS2-10</a>
1/4 in.	Stainless steel poppet 6000 psig (413 bar) check valve, 1/4 in. Swagelok tube fitting, 1/3 psig (0.03 bar)	<a href="#">SS-CHS4-1/3</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 1/4 in. Swagelok tube fitting, 1 psig (0.07 bar)	<a href="#">SS-CHS4-1</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 1/4 in. Swagelok tube fitting, 5 psig (0.35 bar)	<a href="#">SS-CHS4-5</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 1/4 in. Swagelok tube fitting, 10 psig (0.69 bar)	<a href="#">SS-CHS4-10</a>
3/8 in.	Stainless steel poppet 6000 psig (413 bar) check valve, 3/8 in. Swagelok tube fitting, 1/3 psig (0.03 bar)	<a href="#">SS-CHS6-1/3</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 3/8 in. Swagelok tube fitting, 1 psig (0.07 bar)	<a href="#">SS-CHS6-1</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 3/8 in. Swagelok tube fitting, 5 psig (0.35 bar)	<a href="#">SS-CHS6-5</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 3/8 in. Swagelok tube fitting, 10 psig (0.69 bar)	<a href="#">SS-CHS6-10</a>

End Connection Size	Description	Ordering Number
1/2	Stainless steel poppet 6000 psig (413 bar) check valve, 1/2 in. Swagelok tube fitting, 1/3 psig (0.03 bar)	<a href="#">SS-CHS8-1/3</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 1/2 in. Swagelok tube fitting, 1 psig (0.07 bar)	<a href="#">SS-CHS8-1</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 1/2 in. Swagelok tube fitting, 5 psig (0.35 bar)	<a href="#">SS-CHS8-5</a>
	Stainless steel poppet 6000 psig (413 bar) check valve, 1/2 in. Swagelok tube fitting, 10 psig (0.69 bar)	<a href="#">SS-CHS8-10</a>
3/4	Stainless steel poppet 5000 psig (344 bar) check valve, 3/4 in. Swagelok tube fitting, 1/3 psig (0.03 bar)	<a href="#">SS-CHS12-1/3</a>
	Stainless steel poppet 5000 psig (344 bar) check valve, 3/4 in. Swagelok tube fitting, 1 psig (0.07 bar)	<a href="#">SS-CHS12-1</a>
	Stainless steel poppet 5000 psig (344 bar) check valve, 3/4 in. Swagelok tube fitting, 5 psig (0.35 bar)	<a href="#">SS-CHS12-5</a>
	Stainless steel poppet 5000 psig (344 bar) check valve, 3/4 in. Swagelok tube fitting, 10 psig (0.69 bar)	<a href="#">SS-CHS12-10</a>
1	Stainless steel poppet 4700 psig (323 bar) check valve, 1 in. Swagelok tube fitting, 1/3 psig (0.03 bar)	<a href="#">SS-CHS16-1/3</a>
	Stainless steel poppet 4700 psig (323 bar) check valve, 1 in. Swagelok tube fitting, 1 psig (0.07 bar)	<a href="#">SS-CHS16-1</a>
	Stainless steel poppet 4700 psig (413 bar) check valve, 1 in. Swagelok tube fitting, 5 psig (0.35 bar)	<a href="#">SS-CHS16-5</a>
	Stainless steel poppet 4700 psig (323 bar) check valve, 1 in. Swagelok tube fitting, 10 psig (0.69 bar)	<a href="#">SS-CHS16-10</a>



## Swagelok® Tube Fittings

Our tube fittings deliver a leak-tight, gas-tight seal that is resistant to vibration fatigue, even in harsh environments or stressful applications. They withstand high pressures and temperature extremes and are easy to install, disassemble, and reassemble in a variety of situations. Swagelok tube fittings can be used on thick- or thin-walled, hard or soft tubing and resist the effects of pressure and thermal cycling.

### These fittings feature:

- Availability in tube sizes from 1/16 to 2 in. and 2 to 50 mm
- Consistent gaugeability upon initial installation
- Easy disassembly and reassembly
- A wide variety of materials and configurations
- Demonstrated reliability and performance

Refer to our [▶ Tube Fitting web page](#) for product ratings, materials of construction, dimensions, and additional information.

Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.

## Alloy 625 Swagelok® Tube Fittings

All alloy 625 products listed in the following tables are compliant with Norsok and NACE MR0175/ISO 15156.

Refer to our [▶ Alloy 625 Tube Fitting web page](#) for product ratings, materials of construction, dimensions, and additional information.



## Alloy 400 Swagelok® Tube Fittings

All Alloy 400 products listed in the following tables are compliant with Norsok and NACE MR0175/ISO 15156.

Refer to our [▶ Alloy 400 Tube Fitting web page](#) for product ratings, materials of construction, dimensions, and additional information.



## 316 Stainless Steel

Tube OD, In.	Description	Ordering Number
1/4	Male connector, 1/4 to 1/8 in.	<a href="#">SS-400-1-2</a>
	Male connector	<a href="#">SS-400-1-4</a>
	Male connector, 1/4 to 1/2 in.	<a href="#">SS-400-1-8</a>
	90° male elbow	<a href="#">SS-400-2-4</a>
	Tee, union	<a href="#">SS-400-3</a>
	Straight, union	<a href="#">SS-400-6</a>
	Female connector	<a href="#">SS-400-7-4</a>
	Elbow, union	<a href="#">SS-400-9</a>
	Bulkhead union	<a href="#">SS-400-61</a>
	Cap	<a href="#">SS-400-C</a>
	Plug	<a href="#">SS-400-P</a>
	Reducer, 1/2 to 1/4 in.	<a href="#">SS-400-R-8</a>
	3/8	Male connector, 3/8 to 1/4 in.
Male connector		<a href="#">SS-600-1-6</a>
Male connector, 3/8 to 1/2 in.		<a href="#">SS-600-1-8</a>
90° male elbow, 3/8 to 1/4 in.		<a href="#">SS-600-2-4</a>
Tee, union		<a href="#">SS-600-3</a>
Straight, union		<a href="#">SS-600-6</a>
Female connector, 3/8 to 1/4 in.		<a href="#">SS-600-7-4</a>
Elbow, union		<a href="#">SS-600-9</a>
Bulkhead union		<a href="#">SS-600-61</a>
Cap		<a href="#">SS-600-C</a>
Plug		<a href="#">SS-600-P</a>
Reducer, 1/2 to 3/8 in.		<a href="#">SS-600-R-8</a>

Tube OD, In.	Description	Ordering Number
1/2	Male connector, 1/2 to 1/4 in.	<a href="#">SS-810-1-4</a>
	Male connector	<a href="#">SS-810-1-8</a>
	Male connector, 1/2 to 3/4 in.	<a href="#">SS-810-1-12</a>
	90° male elbow, 1/2 to 1/4 in.	<a href="#">SS-810-2-4</a>
	90° male elbow	<a href="#">SS-810-2-8</a>
	Tee, union	<a href="#">SS-810-3</a>
	Straight, union	<a href="#">SS-810-6</a>
	Straight, union, 1/2 to 3/8 in.	<a href="#">SS-810-6-6</a>
	Female connector	<a href="#">SS-810-7-8</a>
	Elbow, union	<a href="#">SS-810-9</a>
	Bulkhead union	<a href="#">SS-810-61</a>
	Cap	<a href="#">SS-810-C</a>
	Plug	<a href="#">SS-810-P</a>
3/4	Male connector, 3/4 to 1/2 in.	<a href="#">SS-1210-1-8</a>
	Male connector	<a href="#">SS-1210-1-12</a>
	90° male elbow, 3/4 to 1/2 in.	<a href="#">SS-1210-2-8</a>
	90° male elbow	<a href="#">SS-1210-2-12</a>
	Tee, union	<a href="#">SS-1210-3</a>
	Straight, union	<a href="#">SS-1210-6</a>
	Straight, union, 3/4 to 1/2 in.	<a href="#">SS-1210-6-8</a>
	Female connector, 3/4 to 1/2 in.	<a href="#">SS-1210-7-8</a>
	Female connector	<a href="#">SS-1210-7-12</a>
	Elbow, union	<a href="#">SS-1210-9</a>
	Bulkhead union	<a href="#">SS-1210-61</a>
	Cap	<a href="#">SS-1210-C</a>
	Plug	<a href="#">SS-1210-P</a>

Tube OD, In.	Description	Ordering Number
1	Male connector, 1/2 to 1 in.	<a href="#">SS-1610-1-8</a>
	Male connector, 3/4 to 1 in.	<a href="#">SS-1610-1-12</a>
	Male connector	<a href="#">SS-1610-1-16</a>
	90° male elbow	<a href="#">SS-1610-2-16</a>
	Tee, union	<a href="#">SS-1610-3</a>
	Straight, union	<a href="#">SS-1610-6</a>
	Straight, union, 1/2 to 1 in.	<a href="#">SS-1610-6-8</a>
	Female connector, 1/2 to 1 in.	<a href="#">SS-1610-7-8</a>
	Female connector, 3/4 to 1 in.	<a href="#">SS-1610-7-12</a>
	Elbow, union	<a href="#">SS-1610-9</a>
	Bulkhead union	<a href="#">SS-1610-61</a>
	Cap	<a href="#">SS-1610-C</a>
	Plug	<a href="#">SS-1610-P</a>

Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.



## Alloy 625

Tube OD, In.	Description	Ordering Number
<b>1/4</b>	Male connector	<a href="#">625-400-1-4</a>
	Male connector, 1/4 to 1/2 in.	<a href="#">625-400-1-8</a>
	90° male elbow	<a href="#">625-400-2-4</a>
	Tee, union	<a href="#">625-400-3</a>
	Straight, union	<a href="#">625-400-6</a>
	Female connector	<a href="#">625-400-7-4</a>
	Elbow, union	<a href="#">625-400-9</a>
	Bulkhead union	<a href="#">625-400-61</a>
	Cap	<a href="#">625-400-C</a>
	Plug	<a href="#">625-400-P</a>
<b>3/8</b>	Reducer, 1/4 to 3/8 in.	<a href="#">625-400-R-6</a>
	Male connector, 3/8 to 1/4 in.	<a href="#">625-600-1-4</a>
	Male connector	<a href="#">625-600-1-6</a>
	Male connector, 3/8 to 1/2 in.	<a href="#">625-600-1-8</a>
	90° male elbow, 3/8 to 1/4 in.	<a href="#">625-600-2-4</a>
	90° male elbow, 3/8 to 1/2 in.	<a href="#">625-600-2-8</a>
	Tee, union	<a href="#">625-600-3</a>
	Straight, union	<a href="#">625-600-6</a>
	Female connector, 3/8 to 1/4 in.	<a href="#">625-600-7-4</a>
	Elbow, union	<a href="#">625-600-9</a>
<b>1/2</b>	Bulkhead union	<a href="#">625-600-61</a>
	Cap	<a href="#">625-600-C</a>
	Plug	<a href="#">625-600-P</a>
	Reducer, 1/2 to 3/8 in.	<a href="#">625-600-R-8</a>

Tube OD, In.	Description	Ordering Number
<b>1/2</b>	Male connector, 1/2 to 1/4 in.	<a href="#">625-810-1-4</a>
	Male connector 1/2 to 3/8 in.	<a href="#">625-810-1-6</a>
	Male connector	<a href="#">625-810-1-8</a>
	90° male elbow	<a href="#">625-810-2-8</a>
	Tee, union	<a href="#">625-810-3</a>
	Straight, union	<a href="#">625-810-6</a>
	Female connector	<a href="#">625-810-7-8</a>
	Elbow, union	<a href="#">625-810-9</a>
	Bulkhead union	<a href="#">625-810-61</a>
	Cap	<a href="#">625-810-C</a>
<b>3/4</b>	Plug	<a href="#">625-810-P</a>
	Male connector, 3/4 to 1/2 in.	<a href="#">625-1210-1-8</a>
	Male connector	<a href="#">625-1210-1-12</a>
	90° male elbow, 3/4 to 1/2 in.	<a href="#">625-1210-2-8</a>
	90° male elbow	<a href="#">625-1210-2-12</a>
	Tee, union	<a href="#">625-1210-3</a>
	Straight, union	<a href="#">625-1210-6</a>
	Straight, union, 3/4 to 1/2 in.	<a href="#">625-1210-6-8</a>
	Female connector, 3/4 to 1/2 in.	<a href="#">625-1210-7-8</a>
	Female connector	<a href="#">625-1210-7-12</a>
<b>1</b>	Elbow, union	<a href="#">625-1210-9</a>
	Bulkhead union	<a href="#">625-1210-61</a>
	Cap	<a href="#">625-1210-C</a>
	Plug	<a href="#">625-1210-P</a>

Tube OD, In.	Description	Ordering Number
<b>1</b>	Male connector, 1/2 to 1 in.	<a href="#">625-1610-1-8</a>
	Male connector, 1/2 to 3/4 in.	<a href="#">625-1610-1-12</a>
	Male connector	<a href="#">625-1610-1-16</a>
	90° male elbow	<a href="#">625-1610-2-16</a>
	Tee, union	<a href="#">625-1610-3</a>
	Straight, union	<a href="#">625-1610-6</a>
	Straight, union, 1/2 to 1 in.	<a href="#">625-1610-6-8</a>
	Female connector, 3/4 to 1 in.	<a href="#">625-1610-7-12</a>
	Female connector	<a href="#">625-1610-7-16</a>
	Elbow, union	<a href="#">625-1610-9</a>
<b>1</b>	Bulkhead union	<a href="#">625-1610-61</a>
	Cap	<a href="#">625-1610-C</a>
	Plug	<a href="#">625-1610-P</a>

Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.



## Alloy 400

Tube OD, In.	Description	Ordering Number
<b>1/4</b>	Male connector	<a href="#">M-400-1-4</a>
	Male connector, 1/4 to 1/2 in.	<a href="#">M-400-1-8</a>
	Tee, union	<a href="#">M-400-3</a>
	Straight, union	<a href="#">M-400-6</a>
	Bulkhead union	<a href="#">M-400-61</a>
	Cap	<a href="#">M-400-C</a>
	Plug	<a href="#">M-400-P</a>
<b>3/8</b>	Male connector	<a href="#">M-600-1-4</a>
	Male connector, 3/8 to 1/2 in.	<a href="#">M-600-1-8</a>
	90° male elbow, 3/8 to 1/4 in.	<a href="#">M-600-2-4</a>
	Tee, union	<a href="#">M-600-3</a>
	Straight, union	<a href="#">M-600-6</a>
	Elbow, union	<a href="#">M-600-9</a>
	Bulkhead union	<a href="#">M-600-61</a>
	Cap	<a href="#">M-600-C</a>
	Plug	<a href="#">M-600-P</a>

Tube OD, In.	Description	Ordering Number
<b>1/2</b>	Male connector, 1/2 to 1/4 in.	<a href="#">M-810-1-4</a>
	Male connector	<a href="#">M-810-1-8</a>
	90° male elbow, 1/2 to 1/4 in.	<a href="#">M-810-2-4</a>
	Tee, union	<a href="#">M-810-3</a>
	Straight, union	<a href="#">M-810-6</a>
	Elbow, union	<a href="#">M-810-9</a>
	Bulkhead union	<a href="#">M-810-61</a>
	Cap	<a href="#">M-810-C</a>
	Plug	<a href="#">M-810-P</a>
	<b>3/4</b>	Male connector, 3/4 to 1/2 in.
Male connector		<a href="#">M-1210-1-12</a>
90° male elbow, 3/4 to 1/2 in.		<a href="#">M-1210-2-8</a>
90° male elbow		<a href="#">M-1210-2-12</a>
Tee, union		<a href="#">M-1210-3</a>
Straight, union		<a href="#">M-1210-6</a>
Straight, union, 3/4 to 1/2 in.		<a href="#">M-1210-6-8</a>
Female connector, 3/4 to 1/2 in.		<a href="#">M-1210-7-8</a>
Female connector		<a href="#">M-1210-7-12</a>
Elbow, union		<a href="#">M-1210-9</a>
Bulkhead union		<a href="#">M-1210-61</a>
Cap		<a href="#">M-1210-C</a>
Plug	<a href="#">M-1210-P</a>	

Tube OD, In.	Description	Ordering Number
<b>1</b>	Male connector, 1/2 to 1 in.	<a href="#">M-1610-1-8</a>
	Male connector, 1/2 to 3/4 in.	<a href="#">M-1610-1-12</a>
	Male connector	<a href="#">M-1610-1-16</a>
	90° male elbow	<a href="#">M-1610-2-16</a>
	Tee, union	<a href="#">M-1610-3</a>
	Straight, union	<a href="#">M-1610-6</a>
	Straight, union, 1/2 to 1 in.	<a href="#">M-1610-6-8</a>
	Female connector, 3/4 to 1 in.	<a href="#">M-1610-7-12</a>
	Female connector	<a href="#">M-1610-7-16</a>
	Elbow, union	<a href="#">M-1610-9</a>
	Bulkhead union	<a href="#">M-1610-61</a>
Cap	<a href="#">M-1610-C</a>	
Plug	<a href="#">M-1610-P</a>	

Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.



## Swagelok® FK Series Fittings

Swagelok® medium-pressure tube fittings (FK Series) reduce installation time and lower assembly and maintenance costs, while providing a more reliable and robust connection resulting in increased uptime.

### These fittings include:

- Preassembled cartridge for correct ferrule orientation and installation
- Leaktight gas seal and vibration resistance in applications up to 20 000 psig (1378 bar)
- Specially designed ferrule geometry, promotes a patented hinging-collecting™ action

Refer to our [FK Series web page](#) for product ratings, materials of construction, dimensions, and additional information.



Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.

Tube OD, In.	Description	Ordering Number
1/4 in.	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Male Connector, 1/4 in. Tube OD x 1/4 in. Male NPT	<a href="#">SS-4FK0-1-4</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Male Connector, 1/4 in. Tube OD x 1/2 in. Male NPT	<a href="#">SS-4FK0-1-8</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Union Tee, 1/4 in. Tube OD	<a href="#">SS-4FK-3</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Union, 1/4 in. Tube OD	<a href="#">SS-4FK0-6</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Bulkhead Union, 1/4 in. Tube OD	<a href="#">SS-4FK0-61</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Female Connector, 1/4 in. Tube OD x 1/4 in. Female NPT	<a href="#">SS-4FK0-7-4</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, 90° Union Elbow, 1/4 in. Tube OD	<a href="#">SS-4FK0-9</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Cap, 1/4 in. Tube OD	<a href="#">SS-4FK0-C</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Plug, 1/4 in. Tube OD	<a href="#">SS-4FK0-P</a>
	3/8 in.	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Male Connector, 3/8 in. Tube OD x 1/4 in. Male NPT
316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Male Connector, 3/8 in. Tube OD x 1/2 in. Male NPT		<a href="#">SS-6FK01-8</a>
316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Union Tee, 3/8 in. Tube OD		<a href="#">SS-6FK0-3</a>
316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Union, 3/8 in. Tube OD		<a href="#">SS-6FK0-6</a>
316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Bulkhead Union, 3/8 in. Tube OD		<a href="#">SS-6FK0-61</a>

Tube OD, In.	Description	Ordering Number
3/8 in.	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Female Connector, 3/8 in. Tube OD x 1/4 in. Female NPT	<a href="#">SS-6FK0-7-4</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, 90° Union Elbow, 3/8 in. Tube OD	<a href="#">SS-6FK0-9</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Cap, 3/8 in. Tube OD	<a href="#">SS-6FK0-C</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Plug, 3/8 in. Tube OD	<a href="#">SS-6FK0-P</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Male Connector, 1/2 in. Tube OD x 1/4 in. Male NPT	<a href="#">SS-8FK01-4</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Male Connector, 1/2 in. Tube OD x 1/2 in. Male NPT	<a href="#">SS-8FK01-8</a>
1/2 in.	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Union Tee, 1/2 in. Tube OD	<a href="#">SS-8FK0-3</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Union, 1/2 in. Tube OD	<a href="#">SS-8FK0-6</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Bulkhead Union, 1/2 in. Tube OD	<a href="#">SS-8FK061</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Female Connector, 1/2 in. Tube OD x 1/2 in. Female NPT	<a href="#">SS-8FK0-7-8</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, 90° Union Elbow, 1/2 in. Tube OD	<a href="#">SS-8FK0-9</a>
	316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Cap, 1/2 in. Tube OD	<a href="#">SS-8FK0-C</a>
316 Stainless Steel Swagelok Medium-Pressure Tube Fitting, Plug, 1/2 in. Tube OD	<a href="#">SS-8FK0-P</a>	



## Swagelok® Flange Adapters

Piping flange to Swagelok® tube fitting adapters reduce potential system leak points with a threadless, weldless transition from flanged piping systems to tubing systems.

### Our flange adapters feature:

- Flange types meeting ASME, DIN EN, and JIS standards
- Wrench flats for ease of tube fitting assembly
- Gaugeability on initial installation using Swagelok gap inspection gauges

Refer to our [Flange Adapter web page](#) for product ratings, materials of construction, dimensions, and additional information.



Tube OD, In.	Description	Ordering Number
3/8	3/8 in. Swagelok tube fitting to NPS 1/2 in. Class 150 ANSI flange	<a href="#">SS-600-F8-150</a>
	3/8 in. Swagelok tube fitting to NPS 1/2 in. Class 300 ANSI flange	<a href="#">SS-600-F8-300</a>
	3/8 in. Swagelok tube fitting to NPS 1/2 in. Class 400/600 ANSI flange	<a href="#">SS-600-F8-600</a>
1/2	1/2 in. Swagelok tube fitting to NPS 1/2 in. Class 150 ANSI flange	<a href="#">SS-810-F8-150</a>
	1/2 in. Swagelok tube fitting to NPS 1/2 in. Class 300 ANSI flange	<a href="#">SS-810-F8-300</a>
	1/2 in. Swagelok tube fitting to NPS 1/2 in. Class 400/600 ANSI flange	<a href="#">SS-810-F8-600</a>
	1/2 in. Swagelok tube fitting to NPS 3/4 in. Class 150 ANSI flange	<a href="#">SS-810-F12-150</a>
	1/2 in. Swagelok tube fitting to NPS 3/4 in. Class 300 ANSI flange	<a href="#">SS-810-F12-300</a>
	1/2 in. Swagelok tube fitting to NPS 3/4 in. Class 400/600 ANSI flange	<a href="#">SS-810-F12-600</a>
	1/2 in. Swagelok tube fitting to NPS 1 in. Class 150 ANSI flange	<a href="#">SS-810-F16-150</a>
	1/2 in. Swagelok tube fitting to NPS 1 in. Class 300 ANSI flange	<a href="#">SS-810-F16-300</a>
	1/2 in. Swagelok tube fitting to NPS 1 in. Class 400/600 ANSI flange	<a href="#">SS-810-F16-600</a>
1/2	1/2 in. Swagelok tube fitting to NPS 2 in. Class 150 ANSI flange	<a href="#">SS-810-F32-150</a>
	1/2 in. Swagelok tube fitting to NPS 2 in. Class 300 ANSI flange	<a href="#">SS-810-F32-300</a>
	1/2 in. Swagelok tube fitting to NPS 2 in. Class 400/600 ANSI flange	<a href="#">SS-810-F32-600</a>

Tube OD, In.	Description	Ordering Number
3/4	3/4 in. Swagelok tube fitting to NPS 3/4 in. Class 150 ANSI flange	<a href="#">SS-1210-F12-150</a>
	3/4 in. Swagelok tube fitting to NPS 3/4 in. Class 300 ANSI flange	<a href="#">SS-1210-F12-300</a>
	3/4 in. Swagelok tube fitting to NPS 3/4 in. Class 400/600 ANSI flange	<a href="#">SS-1210-F12-600</a>
1	1 in. Swagelok tube fitting to NPS 1 in. Class 150 ANSI flange	<a href="#">SS-1610-F16-150</a>
	1 in. Swagelok tube fitting to NPS 1 in. Class 300 ANSI flange	<a href="#">SS-1610-F16-300</a>
	1 in. Swagelok tube fitting to NPS 1 in. Class 400/600 ANSI flange	<a href="#">SS-1610-F16-600</a>

Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.



## Swagelok® QC Series Quick-Connects

Connect quickly and with confidence using our wide variety of quick-connect configurations to reduce spillage and air inclusion in your system.

### These valves feature:

- Single-end shutoff, double-end shutoff, and full-flow models
- No twisting, turning, or wrenching necessary

Refer to our [Quick-Connects web page](#) for product ratings, materials of construction, dimensions, and additional information.

Series	Description	Ordering Number
QC4	Stainless steel instrumentation Quick-Connect body, 0.08 Cv, 1/8 in. Swagelok tube fitting	<a href="#">SS-QC4-B-200</a>
	Stainless steel instrumentation Quick-Connect stem with valve, 0.08 Cv, 1/8 in. Swagelok tube fitting	<a href="#">SS-QC4-D-200</a>
	Stainless steel instrumentation Quick-Connect stem without valve, 0.08 Cv, 1/8 in. Swagelok tube fitting	<a href="#">SS-QC4-S-200</a>
	Stainless steel instrumentation Quick-Connect body, 0.2 Cv, 1/4 in. Swagelok tube fitting	<a href="#">SS-QC4-B-400</a>
	Stainless steel instrumentation Quick-Connect stem with valve, 0.2 Cv, 1/4 in. Swagelok tube fitting	<a href="#">SS-QC4-D-400</a>
	Stainless steel instrumentation Quick-Connect stem without valve, 0.3 Cv, 1/4 in. Swagelok tube fitting	<a href="#">SS-QC4-S-400</a>
QC6	Stainless steel instrumentation Quick-Connect body, 0.5 Cv, 3/8 in. Swagelok tube fitting	<a href="#">SS-QC6-B-600</a>
	Stainless steel instrumentation Quick-Connect stem with valve, 0.5 Cv, 3/8 in. Swagelok tube fitting	<a href="#">SS-QC6-D-600</a>
	Stainless steel instrumentation Quick-Connect stem without valve, 1.0 Cv, 3/8 in. Swagelok tube fitting	<a href="#">SS-QC6-S-600</a>
QC8	Stainless steel instrumentation Quick-Connect body, 1.5 Cv, 1/2 in. Swagelok tube fitting	<a href="#">SS-QC8-B-810</a>
	Stainless steel instrumentation Quick-Connect stem with valve, 1.5 Cv, 1/2 in. Swagelok tube fitting	<a href="#">SS-QC8-D-810</a>
	Stainless steel instrumentation Quick-Connect stem without valve, 2.4 Cv, 1/2 in. Swagelok tube fitting	<a href="#">SS-QC8-S-810</a>



Products listed on this page have the shortest lead time. However, this doesn't mean that you don't have access to the entire Swagelok product catalog. A dedicated team of global construction specialists can help you choose from the tens of thousands of Swagelok-manufactured products and materials of construction, including assembled-to-order and engineered-to-order part numbers. Contact your local sales and service center for additional options.



## Swagelok® Pressure Gauges

Swagelok industrial and process pressure gauges provide accurate pressure measurement for industrial, ultra high-purity, and sanitary applications available in a variety of pressure ranges, dial sizes, connections, mountings, and options. Every Swagelok pressure gauge is factory calibrated and pressure tested to provide reliable performance.

### Our pressure gauges feature:

- Panel mount adapter configurations
- Lower, center-back, and lower-back mounting options
- NPT and tube adapter end connection options

Refer to our [Pressure Gauges web page](#) for product ratings, materials of construction, dimensions, and additional information.



Model	Features	Pressure Ranges
<b>A Model</b>	<ul style="list-style-type: none"> <li>• Refrigerant ammonia pressure measurement and temperature with ammonia refrigerant scales on dial.</li> <li>• 63 and 100 mm (2 1/2 and 4 in.) dial sizes are available.</li> <li>• Crimped ring provides a permanent seal of gauge case to lens.</li> <li>• Lens is constructed of clear polycarbonate.</li> </ul>	<ul style="list-style-type: none"> <li>• Compound Gauges                             <ul style="list-style-type: none"> <li>• 30 in. Hg / 0 to 150 psi (89°F)</li> <li>• 30 in. Hg / 0 to 300 psi (126°F)</li> </ul> </li> <li>• Positive - Pressure Gauges                             <ul style="list-style-type: none"> <li>• 0 to 150 psi (89°F)</li> <li>• 0 to 300 psi (126°F)</li> </ul> </li> </ul>
<b>B Model</b>	<ul style="list-style-type: none"> <li>• 63, 100, and 160 mm (2 1/2, 4, and 6 in.) dial sizes are available.</li> <li>• Bayonet ring allows easy access to pointer.</li> <li>• Lens is constructed of polycarbonate for additional protection.</li> </ul>	<ul style="list-style-type: none"> <li>• Compound Gauges                             <ul style="list-style-type: none"> <li>• Vacuum to 0 psi through vacuum to 200 psi</li> </ul> </li> <li>• Positive - Pressure Gauges                             <ul style="list-style-type: none"> <li>• 0 to 15 psi through 0 to 15,000 psi</li> </ul> </li> </ul>
<b>C Model</b>	<ul style="list-style-type: none"> <li>• 63 and 100 mm (2 1/2 and 4 in.) dial sizes are available.</li> <li>• Crimped ring provides a permanent seal of gauge case to lens.</li> <li>• Lens is constructed of clear polycarbonate.</li> </ul>	<ul style="list-style-type: none"> <li>• Compound Gauges                             <ul style="list-style-type: none"> <li>• Vacuum to 0 psi through vacuum to 200 psi</li> </ul> </li> <li>• Positive - Pressure Gauges                             <ul style="list-style-type: none"> <li>• 0 to 15 psi through 0 to 15,000 psi</li> </ul> </li> </ul>
<b>L Model</b>	<ul style="list-style-type: none"> <li>• 63 and 100 mm (2 1/2 and 4 in.) dial sizes are available.</li> <li>• Diaphragm capsule design offers low-pressure measurement capability.</li> <li>• A zero adjustment screw is on the dial.</li> <li>• Lens is constructed of polycarbonate.</li> </ul>	<ul style="list-style-type: none"> <li>• Positive - Pressure Gauges                             <ul style="list-style-type: none"> <li>• 0 to 15 in. H<sub>2</sub>O through 0 to 200 in. H<sub>2</sub>O</li> <li>• 0 to 5 psi through 0 to 10 psi</li> </ul> </li> </ul>

Model	Features	Pressure Ranges
<b>M Model</b>	<ul style="list-style-type: none"> <li>• 40 and 50 mm (1 1/2 and 2 in.) dial sizes are available.</li> <li>• Miniature size allows placement in compact spaces.</li> <li>• Snap-in lens saves space when compared to twist-on lens.</li> </ul>	<ul style="list-style-type: none"> <li>• Compound Gauges                             <ul style="list-style-type: none"> <li>• Vacuum to 0 psi through vacuum to 200 psi</li> </ul> </li> <li>• Positive - Pressure Gauges                             <ul style="list-style-type: none"> <li>• 0 to 15 psi through 0 to 10,000 psi</li> </ul> </li> </ul>
<b>P Model</b>	<ul style="list-style-type: none"> <li>• 115 and 160 mm (4 1/2 and 6 in.) dial sizes are available.</li> <li>• Solid front and blowout back for severe service.</li> <li>• Design meets safety requirements of ASME B40.100.</li> <li>• Adjustable pointer is standard.</li> <li>• Threaded cover ring allows easy access to pointer.</li> <li>• Lens is constructed of clear acrylic plastic.</li> </ul>	<ul style="list-style-type: none"> <li>• Compound Gauges                             <ul style="list-style-type: none"> <li>• Vacuum to 0 psi through vacuum to 400 psi</li> </ul> </li> <li>• Positive - Pressure Gauges                             <ul style="list-style-type: none"> <li>• 0 to 15 psi through 0 to 15,000 psi</li> </ul> </li> </ul>
<b>S Model</b>	<ul style="list-style-type: none"> <li>• 63 and 100 mm (2 1/2 and 4 in.) dial sizes are available.</li> <li>• Lower mount configuration is liquid fillable.</li> <li>• Solid front and blowout back for severe service.</li> <li>• Design meets safety requirements of ASME B40.100 and EN 837-1.</li> </ul>	<ul style="list-style-type: none"> <li>• Compound Gauges                             <ul style="list-style-type: none"> <li>• Vacuum to 0 psi through vacuum to 200 psi</li> </ul> </li> <li>• Positive - Pressure Gauges                             <ul style="list-style-type: none"> <li>• 0 to 15 psi through 0 to 15,000 psi</li> </ul> </li> </ul>



## Embark on a Successful Venture with Swagelok

We are ready to help make your submarine project a success. With our global presence, local support, quality solutions, and industry-leading support, you can realize:

- Enhanced safety
- Improved uptime and reliability
- Minimized environmental impact
- Lower total cost of ownership
- Optimized project execution
- Nuclear quality



**Looking for additional information?**  
**Reach out and I'd be glad to setup a time to talk.**

**Chris Spence**  
Business Development Manager - Naval Market

[christopher.spence@swagelok.com](mailto:christopher.spence@swagelok.com)  
518.258.2267





[albany.swagelok.com](http://albany.swagelok.com)