Swagelok Nuclear Capabilities

Engineered to Help You Perform

Swagelok understands the pressures you face. We can help you meet the immediate and long-term demands of the nuclear power industry. Safely. Reliably. Responsively. And with the knowledge that the products you choose are especially suited for your applications.
Our Quality & Reliability = Your Safety

Minimize risk by choosing Swagelok
We help you reduce workers’ collective radiation doses and the cost impact of that exposure.

• Our dedication to quality and reliability leads to longer product life, reducing downtime

• Our products’ ease of installation means you’re up and running quicker

• Our focus on As Low As Reasonably Achievable or As Low As Reasonably Practicable (ALARA/ALARP) dose reduction protocols decreases workers’ exposure times as well.

LEARN MORE ABOUT MINIMIZING RISK

LEARN MORE ABOUT OUR CULTURE OF SAFETY AND INNOVATION
Minimizing Risk

Risk can come in many forms – longer exposure of your workers to radiation, non-compliance with nuclear codes and standards, or discovering that the materials you’re using aren’t genuine.

Learn more about how Swagelok helps you minimize risk in your operations.
Dose Reduction

The less your workers are exposed to radiation, the better. Swagelok products’ ease of assembly and reliability, combined with our custom solutions reduce the amount of time workers spend assembling or making repairs in radioactive areas.

LEARN MORE ABOUT EASE OF ASSEMBLY

LEARN MORE ABOUT RELIABILITY

LEARN MORE ABOUT CUSTOM SOLUTIONS
Swagelok products make connecting components easier with our unique tube fitting design and high-quality, repeatable orbital welding capabilities, helping workers get in and out fast.

**Dose Reduction**

**Ease of Assembly**

Swagelok Tube Fitting Installation = 2 People  
120 Minutes  
240 Total Minutes

Manual Weld  
(1 in. stainless steel socket weld) =  
3 People  
240 Minutes  
720 Total Minutes

**M200 ORBITAL WELD**

M200 orbital weld =  
3 people  
55 minutes  
165 total minutes

Manual weld  
(1 in. stainless steel socket weld) =  
3 people  
240 minutes  
720 total minutes
Dose Reduction
Reliability

OVER 10,000 FITTINGS, AND NOT A SINGLE LEAK.

Not everyone can make such claims. Heat. Confined spaces. Gaseous environments. Chemical exposures. Steam hazards. Minimize your exposure to these risks and ensure material integrity by choosing Swagelok fittings over weld connections in your plant.

• Gas-tight seal
• Vibration resistance
• Reduction of leakage related to rapid thermal expansion or contraction

IN A NUCLEAR PLANT
THERE CAN BE AS MANY AS

22,000 SWAGELOK FITTINGS

4,500 SWAGELOK VALVES

250,000 FEET OF TUBING
Dose Reduction
Custom Solutions

Protect your onsite skilled workers from excessive exposure by working with Swagelok’s Nuclear Services Group to develop ASME BPVC Section III, Class 1, 2, and 3 assemblies with proper documentation that provide turnkey assembly, rather than onsite connections. A custom assembly can reduce the number of onsite connections.

We can help:

- Speed the development of project specifications
- Minimize problem-solving time
- Reduce engineering costs by providing on-site engineering, technical support, and product compliance reviews.

CUSTOM SOLUTIONS

75%

REDUCTION IN EXPOSURE TIME
20 On-site tube fitting connections

5 On-site custom assembly connections
Many Swagelok components meet the nuclear industry codes and standards that you require, including:

- 10CFR50 Appendix B/10CFR21
- ASME Section III—N, NPT, NA
- ASME B16.34, B31.1, QME-1
- ASME NQA-1, ANSI N45.2 and daughter standards
- CSA Z299
- ISO 9001: 2008
- MSS-SP Documents for Valve Manufacturing & Testing
- HAF604 (China), CSA N285 (Canada), RCC-M (France)
- Inspecta (Europe)
- Vd TÜV, European Pressure Equipment Directive (PED)
- METI/KHK
- NUPIC Preferred Supplier List
- F4N Fit for Nuclear certification

Our work with NUPIC, EFCOG, and NIAC ensures our place on nuclear industry preferred supplier lists.
CFSI

Protection against counterfeit, fraudulent, and suspect items (CFSI)

Immediate and potential threats to the safety of your workers, plant performance, the public, and the environment can be the result of using counterfeit, fraudulent, or suspect items. Our culture of quality helps you guard against CFSI. In addition to our quality controls, Swagelok Associates receive annual training on CFSI detection, prevention, and control.

LEARN MORE ABOUT CFSI
**CFSI**

**Counterfeit Items** are intentionally manufactured or altered to imitate a legitimate product.

**Fraudulent Items** are intentionally misrepresented with intent to deceive the purchaser. Fraudulent items can have these characteristics:

- Incorrect identification
- Falsified certification information
- Used items sold as new

**Suspect Items** are those items suspected of being counterfeit or fraudulent.

LEARN MORE ABOUT CFSI 📚
Swagelok Helps You Avoid CFSI

- Fully traceable supply chain ensures you receive what you ordered, confirmed by product markings and documentation
- Proven quality, backed by our limited lifetime warranty

LEARN MORE ABOUT PROCUREMENT CONTROLS
LEARN MORE ABOUT ACCEPTANCE OF ITEMS
LEARN MORE ABOUT SUPPLIER APPROVAL
LEARN MORE ABOUT RAW MATERIAL SELECTION
CFSI
Procurement Controls

Material bar stock is inspected to ensure compliance.

• Procurement from melting mill
• Engineering-approved specifications for all raw materials, services, and components
• Material Master defines all referenced specifications and drawings with revision level
• Swagelok supplies raw material to component suppliers
CFSI
Acceptance of Items

Swagelok checks for indicators of CFSI in the materials and parts we purchase.

- Altered manufacturer’s name, logo, serial number, or date markings
- Items differing in configuration, dimensions, fit, finish, or color
- Missing, unusual, or altered markings on items or documentation
- Items from country different than that of supplier
- Item lacks traceability
- Items sold as new exhibit evidence of prior use
- Performance inconsistent with specifications, certifications, or test data
Swagelok conducts on-site audits of critical suppliers and sub-suppliers every three years.

- Ongoing audits of key performance factors
- Preferred supplier profile for quality, delivery performance, flexibility, and technical capabilities
Swagelok evaluates all incoming raw material for quality.

- Selection of forgings and bar stock for pressure retaining items
- 100% ultrasonic examination
- Random sampling for independent lab testing
- ISO 17025 accredited lab
- 10CFR50 Appendix B quality program
Culture of Safety and Innovation

Culture of Safety
Swagelok has been dedicated to safety since our inception in 1947. Every associate owns safety, starting on the manufacturing floor. Our employees are constantly looking for safety risks and are empowered to point out safety infractions to anyone, no matter their position.

Here’s a look at our history:
• Late 1950s Launched Nupro® bellows valve for nuclear
• Late 1960s Began providing fittings to the nuclear industry
• 1981 Received ASME Quality System Certificates
• 2002 Received ASME N and NPT Certification
• 2011 Received ASME NA Certification

LEARN ABOUT CULTURE OF INNOVATION
Culture of Safety and Innovation

Culture of Innovation
We maintain an environment where innovation is encouraged, from improving efficiency to enhancing human factors.

Continuous improvement: Lean and Six Sigma events continuously seek to optimize our processes for efficiency.

Training: We continually educate our workforce so that we can perform our duties in a reliable, safe manner.

Innovation: Our culture of innovation has led to advancements in ergonomic approaches to manufacturing that maximize human capital.
We’re Nearby, No Matter Where You Are

Globally, more than 200 authorized Swagelok sales and service centers are fully staffed to suit your needs, from inventory management and on site warehousing to ensure product availability, to on site, in-depth technical assistance, to emergency deliveries and equipment sales and rentals.

Your local Swagelok representative works with you to provide you with the right level of Swagelok resources for an optimized solution to your unique needs.

Countries where Swagelok has sold into the nuclear industry
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Home

Our Quality & Reliability = Your Safety

Minimizing Risk

Dose Reduction
  
  Ease of Assembly
  
  Reliability
  
  Custom Solutions

Code Compliance

CFSI
  
  CFSI
  
  Swagelok Helps you Avoid CFSI
  
  Procurement Controls
  
  Acceptance of Items
  
  Supplier Approval
  
  Raw Material Selection

Culture of Safety and Innovation
  
  Culture of Safety
  
  Culture of Innovation

We're Nearby, No Matter Where You Are

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Because of stringent requirements in nuclear power plants, even a seemingly simple task like making a weld requires extended time and greater numbers of personnel to ensure proper setup and inspection. Swagelok helps minimize worker exposure with improved processes over those of traditional installations. Note that the times shown include all required setup and inspection times. Your actual installation times may vary, depending on your specific application.