



# SWAGELOK<sup>®</sup> NUCLEAR CAPABILITIES

SWAGELOK SOUTHWESTERN ONTARIO

## SWAGELOK<sup>®</sup> PRODUCTS AND SERVICES HELP YOU REDUCE WORKER RADIATION EXPOSURE

Swagelok<sup>®</sup> Southwestern Ontario 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.

Radiological exposure is costing nuclear reactor sites between \$260,100 (Pressurized Water Reactor, PWR) and \$555,900 (Boiling Water Reactor, BWR) per year. While the industry continues to focus on implementing As Low as Reasonably Achievable (ALARA) dose reduction protocols, nuclear workers still face an average collective dose per reactor of 51 person-rem (PWR) and 109 per-rem (BWR).

<sup>1</sup>Swagelok collaborates with you to minimize your workers' exposure time in hazardous environments, and the cost impact of that exposure. In addition to commercial grade and safety-related products and assemblies, we offer local support, backed by a global presence, from initial concept to a solution customized for your needs.



# Dose Reduction by the Numbers

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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.

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## Limit Exposure Time by Using Swagelok® Tube Fittings

# 83%

### Reduction In Exposure Time

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

- Superior performance compared to socket welds
  - Ease of installation reduces assembly time
  - Ability to easily disassemble and re-assemble
  - Quality products means less frequent maintenance required
  - Rigorously tested
  - Available as end connections on multiple Swagelok products including valves and hoses
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## Minimize Assembly Time With Swagelok® Custom Solutions

# 75%

### Reduction In Exposure Time

20 On-site tube fitting connections

5 On-site custom assembly connections

- Reduced connection points minimize assembly time
  - High-quality fabrications by trained, skilled technicians
  - Access to factory testing and seismic evaluation of completed assemblies
  - Eliminates potential waste and rework of onsite assembly
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## Increase Welding Efficiency With M200 Orbital Welding

# 77%

### Reduction In Exposure Time

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

- Easily train and qualify welders with Swagelok Orbital Welding training
  - Reduce number of weld inspections
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## Prevent Rework With Workforce Development

Participate in one of our many training classes to improve efficiency and improve product selection and installation skills.

For more on how Swagelok can help you reduce worker radiation exposure, contact your local sales and service centre:

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