

Swagelok HC-810-P

Instruction Manual

SWAGELOK ALLOY C-276 PLUG, 1/2" TUBE OD COMPRESSION

Model: HC-810-P

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of the Swagelok Alloy C-276 Plug, model HC-810-P. This plug is designed for 1/2" tube outside diameter (OD) compression applications, offering a reliable seal in various industrial environments. Please read this manual thoroughly before using the product to ensure safe and efficient operation.

2. Safety Information

Always adhere to standard safety practices when handling and installing industrial components. Failure to follow these guidelines may result in injury, property damage, or product malfunction.

- Ensure the system is depressurized and drained before installation or maintenance.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Do not overtighten or undertighten fittings. Refer to installation instructions for proper torque specifications.
- Verify material compatibility with the system fluid and operating conditions.
- Keep the product clean and free from contaminants.

3. Product Overview and Components

The Swagelok Alloy C-276 Plug is a robust fitting designed to seal off the end of a 1/2" OD tube line. It consists of a main body with a hexagonal shape for wrenching, and an internal compression mechanism.



Image showing the Swagelok Alloy C-276 Plug, a metallic component with a hexagonal body and threaded interior, designed for tube compression applications. The Swagelok brand name is visible on one side.

Key components include:

- **Plug Body:** The main hexagonal component that houses the sealing mechanism.
- **Nut:** (Not explicitly shown as separate, but implied in compression fittings) Secures the plug to the tube fitting.
- **Ferrules:** (Not explicitly shown as separate, but implied in compression fittings) Front and back ferrules create the seal and grip on the tube.

4. Setup and Installation

Proper installation is crucial for leak-tight performance. Follow these steps carefully:

1. **Prepare the Tube:** Ensure the 1/2" OD tube end is cut squarely, deburred, and free of scratches or defects.
2. **Insert the Plug:** Insert the plug into the Swagelok tube fitting body until it bottoms out.

3. **Finger Tighten:** Finger tighten the nut onto the fitting body.
4. **Wrench Tighten:** Mark the nut at the 6 o'clock position. Tighten the nut 1/4 turn with a wrench. For larger sizes (1" and above), 1/4 turn plus 1/8 turn may be required. Consult Swagelok's official installation guides for precise torque specifications if available for this specific plug type.
5. **Inspect:** Visually inspect the connection to ensure the nut is properly seated and the plug is secure.

***Note:** For critical applications or if unsure, always refer to official Swagelok installation procedures and training resources.*

5. Operating Principles

The Swagelok Alloy C-276 Plug functions by creating a mechanical seal against the internal components of a Swagelok tube fitting. When the nut is tightened, the ferrules are driven forward, with the front ferrule creating a primary seal on the fitting body and the back ferrule providing a secondary seal and gripping the tube (or in this case, the plug itself) securely. The Alloy C-276 material provides excellent corrosion resistance in harsh environments.

6. Maintenance

The Swagelok Alloy C-276 Plug is designed for long-term, reliable service with minimal maintenance. However, periodic inspection is recommended.

- **Visual Inspection:** Regularly check for any signs of corrosion, damage, or leaks around the fitting.
- **Cleaning:** If necessary, clean the exterior of the plug with a mild detergent and water. Avoid abrasive cleaners.
- **Re-tightening:** If a leak is detected, a slight re-tightening (1/8 turn) may resolve it. Do not overtighten. If the leak persists, the fitting may need to be disassembled, inspected, and potentially replaced.
- **Replacement:** If the plug or associated fitting components show significant wear, damage, or cannot maintain a seal, replace them with genuine Swagelok parts.

7. Troubleshooting

Problem	Possible Cause	Solution
Leak at the fitting connection	Insufficient tightening, damaged ferrules, improper tube preparation, or contaminated components.	Slightly re-tighten the nut (1/8 turn). If leak persists, depressurize, disassemble, inspect components for damage, clean, re-cut tube if necessary, and reassemble. Replace damaged parts.
Difficulty tightening the nut	Cross-threading, damaged threads, or incorrect component alignment.	Ensure proper alignment before tightening. Do not force. Inspect threads for damage. Replace if threads are stripped or damaged.
Corrosion on plug surface	Exposure to incompatible chemicals or harsh environmental conditions beyond material limits.	Verify material compatibility for the application. Clean regularly. If corrosion is severe, replace the plug.

8. Specifications

Attribute	Value
Model Number	HC-810-P

Attribute	Value
Brand	Swagelok
Material	Alloy C-276 (Hastelloy)
Tube OD Compatibility	1/2 inch
Connector Type	Plug
Item Weight	1 Pounds
Manufacturer	Swagelok
ASIN	B0859NC3RY
First Available Date	February 28, 2020




9. Warranty and Support

For information regarding product warranty, technical support, or to locate an authorized distributor, please visit the official Swagelok website or contact their customer service. Always ensure you are purchasing genuine Swagelok products for optimal performance and safety.

Official Swagelok Website: www.swagelok.com

© 2024 Swagelok. All rights reserved. Information subject to change without notice.

Related Documents - HC-810-P

	<p>Swagelok FK Series Medium-Pressure Tube Fittings Installation Guide</p> <p>This guide provides detailed installation instructions for Swagelok FK series medium-pressure tube fittings, covering materials such as 316 stainless steel, alloy 2507, and alloy 625. It outlines required tools, step-by-step assembly procedures, torque specifications for various sizes and materials, and gaugeability checks for proper tightening. Instructions for reassembly, cap installation, plug installation, port connectors, and tube adapters/reducers are also included.</p>
	<p>Swagelok Series 20 Weld Head User's Manual - Precision Welding Guide</p> <p>User's manual for the Swagelok Series 20 Weld Head. Learn about installation, operation, maintenance, and specifications for precise welding of tubing and pipe. Includes model numbers and technical details.</p>
	<p>Swagelok Tube Fitting Installation and Reassembly Instructions</p> <p>Comprehensive guide to installing and reassembling Swagelok tube fittings for 1 inch (25 mm) and smaller sizes, covering safe practices, gaugeability, and reassembly steps.</p>

<p>Swagelok</p> <p>Series 5, 10, and 20 Weld Head Tube Fixture Block</p> <p>Attaching Centering Gauge to Plenum</p> <p>1. Attach a screw (M4-40 UNF), a lock washer, and one end of the lanyard to the side of the plenum with the tapered hole.</p> <p>2. Use a screw (M4-40 UNF) and lock washer to attach the centering gauge to the other end of the lanyard.</p>	<p>Swagelok Series 5, 10, and 20 Weld Head Tube Fixture Block Instructions</p> <p>Instructions for attaching the centering gauge to the plenum and performing alignment adjustments for Swagelok Series 5, 10, and 20 Weld Head Tube Fixture Blocks.</p>
<p>www.swagelok.com</p> <p>An Installer's Pocket Guide for Swagelok®</p> <p>Tube Fittings</p>	<p>Swagelok Tube Fittings: An Installer's Pocket Guide</p> <p>Comprehensive guide for Swagelok tube fittings, covering installation, selection, ordering, and replacement parts. Essential resource for installers and engineers.</p>
<p>Gaugeable Tube Fittings and Adapter Fittings</p>	<p>Swagelok Gaugeable Tube Fittings & Adapter Fittings Catalog Reliable Fluid System Connections</p> <p>Discover the comprehensive Swagelok catalog detailing gaugeable tube fittings and adapter fittings. Learn about advanced designs, material options, pressure ratings, and installation tools for reliable fluid system connections across diverse industries.</p>