



# SWAGELOK TRAINING

COMPREHENSIVE CERTIFIED  
TRAINING PROGRAMS



Swagelok Indonesia, was established in 2013 as a leading solution provider of fluid system technologies. We are proud to be the only Swagelok authorized sales and service center, servicing customer throughout Indonesia.

We provide the highest quality fluid system products, assemblies, and services that enabling our customers to achieve their goals consistently and confidently, even in the most demanding and critical situations.

At Swagelok, we're committed to providing our customers with custom training services options that align with their specific needs and concerns.

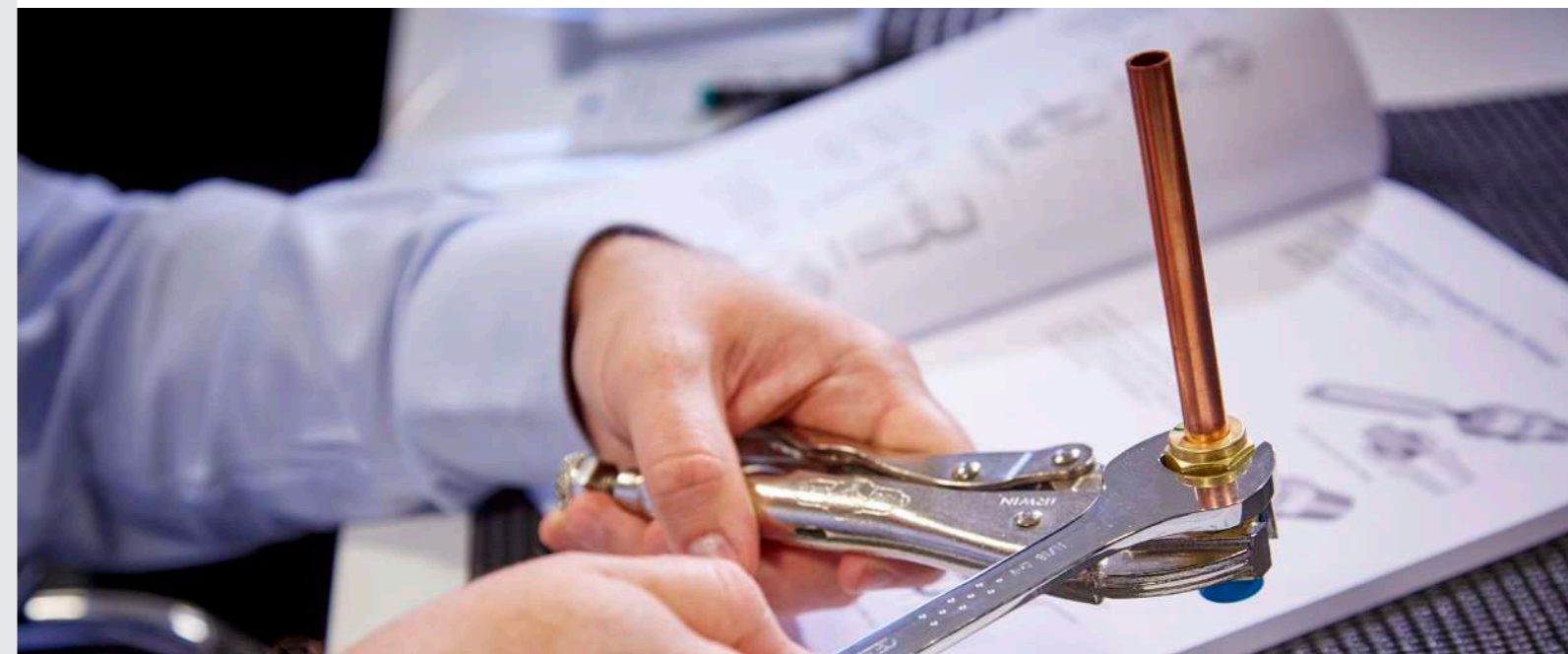
## SWAGELOK INDONESIA TRAINING SERVICES

**Strong training and development programs help produce workers who are better equipped to handle the demands of their jobs, operate more safely, and are more productive. And we're passionate about making sure that such training exists for those who design, operate and maintain fluid systems.**

We offer a wide range of training and services who are just entering the world of fluid systems to those who have worked in it for years.

Our standard training offerings meet or exceed the requirements of many recognized local governing bodies and are available worldwide. You can rest assured that the class you are taking today is consistent with our organization's core values of continuous improvement, quality, and innovation, and will provide you a wealth of knowledge.

Participants leave Swagelok training with an advanced understanding of processes that can enhance workplace safety, and improve efficiency and productivity.



- Globally standardized training courses (applied to 225 Swagelok sales and service centers around the world)
- Swagelok certified trainers (theoretical, practical, & facilitation)
- Record of past attendees unique trainee identification number
- On-site training available
- International subject matter experts

**Save Cost  
Improve Safety  
Minimize Errors  
Increase Productivity**

# SWAGELOK® VIRTUAL CUSTOMER TRAINING PROGRAM

Due to pandemic COVID-19, Swagelok Indonesia has commenced a Virtual Customer Training Program with the following schedule. The training will be conducted via Microsoft Teams Platform for 2 days with interactive sessions. The tools and material required for practice will be sent to each participants. location. The current available topic is **Swagelok® Essentials Training Program**.

Customers may choose from the regular training schedule below to participate. Please contact us for further details.

	Venue: Swagelok Indonesia Service Center	Venue: Microsoft Teams platform
Month	Live Training	Online Training
January	Monday - Tuesday, 9-10 Monday - Tuesday, 16-17	Monday - Tuesday, 30-31
February	Monday - Tuesday, 6-7 Monday - Tuesday, 13-14	Monday - Tuesday, 27-28
March	Monday - Tuesday, 6-7 Monday - Tuesday, 13-14	Monday - Tuesday, 20-21
April	Monday - Tuesday, 3-4 Monday - Tuesday, 10-11	Monday - Tuesday, 17-18
May	Monday - Tuesday, 8-9 Monday - Tuesday, 15-16	Monday - Tuesday, 29-30
June	Monday - Tuesday, 5-6 Monday - Tuesday, 12-13	Monday - Tuesday, 26-27
July	Monday - Tuesday, 3-4 Monday - Tuesday, 10-11	Monday - Tuesday, 24-25
August	Monday - Tuesday, 7-8 Monday - Tuesday, 14-15	Monday - Tuesday, 28-29
September	Monday - Tuesday, 4-5 Monday - Tuesday, 11-12	Monday - Tuesday, 25-26
October	Monday - Tuesday, 9-10 Monday - Tuesday, 16-17	Monday - Tuesday, 30-31
November	Monday - Tuesday, 6-7 Monday - Tuesday, 13-14	Monday - Tuesday, 27-28
December	Monday - Tuesday, 4-5 Monday - Tuesday, 11-12	Monday - Tuesday, 18-19

# SWAGELOK® COMPREHENSIVE TRAINING SERIES

We, at Swagelok Indonesia, consider safety to be our top priority. Our customers depend on our fluid control products to deliver and transfer materials safely and securely – just as we depend on our associates to adhere to the highest safety standards. Swagelok Indonesia is uniquely qualified to provide outstanding training on proper product application and installation.

Our **Swagelok® Comprehensive Training Series** include:

- **Swagelok® Essentials Training Program**
- **Swagelok® Tube fitting Installation Inspection Essentials Training**
- **Swagelok® Tube Bending Essentials Training**
- **Swagelok® Hose Essentials Training**
- **Swagelok® Valve Essentials Training**
- **Swagelok® Medium & High Pressure Cone & Thread Installation Essentials**



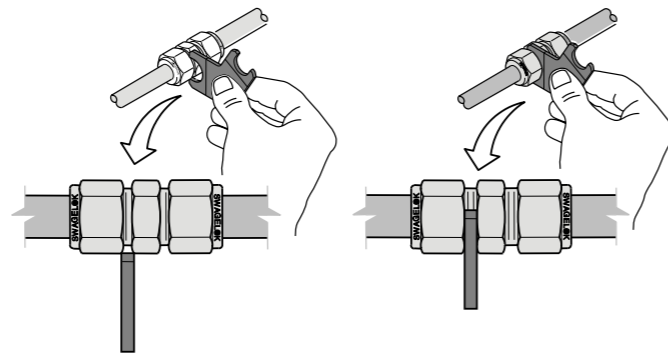
# SWAGELOK® ESSENTIALS TRAINING PROGRAM

## Course Aims

The integrity and performance of the fluid system, whether liquid or gas, depends on a combination of elements: good design, quality fluid system components, and competent assembly and installation by qualified personnel. Well trained installation inevitably leads to reduced material costs, more efficient installations, and improved safety. Our customers trust us to provide expert hands-on training on the proper application and installation of our many fluid system products. We teach our customers to perform and thrive under pressure, just like we do.

## Who should attend?

The Training Essentials Program by Swagelok Indonesia is designed for anyone dealing with instrumentation such as fabrication; operations and technicians who install fittings; and engineers and draftsmen who design systems have also benefited from a better understanding of the capabilities of tubing systems.



## What is included?

- All materials, Swagelok products, tubing, and fittings used on the course
- Swagelok Pocket Installation Manual (for use on-site) Swagelok Pocket Tube Bending Manual (for use on-site)
- Two Swagelok Training Manuals (which covers the entire course contents)
- Theoretical Assessment
- Two Practical Assessments (Tube Fitting Installation and Tube Handling/Bending)
- Certificate of Competency for the Swagelok Installation Training Course
- Credit Card Pass ID (and Global Registration)
- Lunch and refreshments throughout the day (if held at Swagelok Indonesia Office)

## Assessing for Competency

Swagelok Indonesia takes our training seriously hence there is an assessment that follows the theoretical portion of the course followed by two practical exams comprising of tube bending and tube fitting installation.

If a pass mark of 75% is reached in the test and the practicals are passed satisfactorily then the attendees will be qualified in the Swagelok Installation Training course and will receive a certificate of competency and credit card style pass ID (and registered on our global database).

End User can check with Swagelok Indonesia that contractors and staff working on-site have been equipped with the proper skills and safety awareness regarding fluid system installation practices.

## Course Content

### Half day - Tube Fitting Installation and Inspection Essentials

- Tubing preparation, handling, and selection
- Correct material selection
- Metric versus fractional part identification
- Safe tube fitting installation procedures (initial assembly and re-assembly)
- Tube fitting inspection procedures
- Tubing versus piping installation
- Leakage terminology and its implications
- Quarter-turn demonstration
- Product and design characteristic of tube fitting
- Identify components required to make leak free connection
- Intermix/interchange
- Thread terminology, identification, sealing methods and Threaded installation
- Best practice in tube fitting installation (using port connector, cap, plug, depth marking tool, and pre-swaging tool)



## Course Outcome

Attendees on the course, conducted by Swagelok Indonesia training staff, will learn how they can:

- Enhance fluid system performance & efficiency
- Improve safety in the work place
- Reduce costly downtime
- Help eliminate unnecessary leakage and fugitive emissions

### One & half days - Tube Bending Essentials

- Tube cutting and deburring
- Bending terminology
- Hand tube bender components
- Direct measurement bending method
- Gain adjustment bending method
- Offset calculation
- Minimum bend length calculation
- Bend defects
- How to make both simple and complex offset bends
- Tube bending exercise: bending in confined space (panel)
- Tube bending exercise: ¼ inch Tube OD Stainless
- Steel tubing with hand tube bender ¼ inch



## PART NUMBER: TRAINING-E

**Delivery** Classroom

**Practical Content** 70%

**Theoretical Content** 30%

**Course Duration:** One & Half day

**Maximum class size:** 15 attendees

**Prerequisite:** None

**Course Assessment:** Written and practical exams to measure participants' knowledge and skills.

**Training Validity:** Swagelok® Certificate of Completion with 3 years validity (Subject to successful completion of both practical and theoretical exam).

# SWAGELOK® TUBE FITTINGS INSTALLATION INSPECTION ESSENTIAL TRAINING

## Course Aims

In order to achieve leak free connection, it requires not only high quality of tubing, fitting but also the skilled installer about proper tubing selection and preparation, sufficient fitting installation. This is the reason why this course is designed. Another goal of this workshop is to provide the attendees with critical keys of inspection of common installation errors as well as its remedial actions.

## Who should attend?

Anyone dealing with instrumentation such as fabrication; operations and technicians who install fittings; personnel responsible for verification and inspection of pressure tubing installations; and engineers and draftsmen who design systems

## Course Content

- Advantages of tubing systems over pipe
- Proper tubing selection, tubing preparation, tubing handling
- Proper assembly, disassembly and re-assembly of fittings
- Thread identification and installation
- Common errors leading to tube fitting leakage
- Identification of installation errors on:
  - Tubing installation
  - Tube fitting installation
  - Threaded fitting installation
- Disassembly and reassembly procedure for inspection
- Identification of mixed-component fittings (intermix/in-terchange)
  - Fractional/metric fittings
  - Alloy fittings
- Remedial actions
- Exercise of tube fitting installation and loop inspection



### PART NUMBER: TRAINING-TFI

**Delivery** Classroom  
**Practical Content** 50%  
**Theoretical Content** 50%

**Course Duration:** Half day  
**Maximum class size:** 15 attendees  
**Prerequisite:** None  
**Course Assessment:** Written and practical exams to measure participants' knowledge and skills.  
**Training Validity:** Swagelok® Certificate of Completion with 3 years validity (Subject to successful completion of both practical and theoretical exam).

# SWAGELOK® TUBE BENDING ESSENTIAL TRAINING

## Course Aims

The goal of this workshop is to focus on the many different elements necessary to assure accurate and proficient tube bending. This seminar was designed with the users in mind, but is well suited for anyone interested in the design or fabrication of tubing systems. As a supplier of high quality tube, tube benders and tube preparation tools, we offer this class to provide a training resource that demystifies aspects of fluid system fabrication. Good tube fabrication techniques can improve system performance while good layout and execution can enhance the aesthetics of a system and reflect on the skill of the installer.

## Who should attend?

Designed for installers and operators to ensure competency in bending as well as engineers and draftsmen who design systems.



## Course Content

- Identify components of the Hand Tube Bender
- Necessary steps to prepare to complete a tube bend
- Define bending terminology, measurement marks, mini-mum bend lengths, offset
- Bending methods
- General approaches to tube bending
- Point out common bending defects
- Bend exercise -completing quality 45°, 90°, 180° and offset bends



### PART NUMBER: TRAINING-TB

**Delivery** Classroom  
**Practical Content** 80%  
**Theoretical Content** 20%

**Course Duration:** One day  
**Maximum class size:** 15 attendees  
**Prerequisite:** None  
**Course Assessment:** Written and practical exams to measure participants' knowledge and skills.  
**Training Validity:** Swagelok® Certificate of Completion with 3 years validity (Subject to successful completion of both practical and theoretical exam).

# SWAGELOK® HOSE ESSENTIAL TRAINING

## Course Aims

The goal of this workshop is to provide delegates with comprehensive knowledge on hose and flexible tubing construction, components, identification, selection, installation and best practices. The training covers inspection practices in line with the energy institute guidelines.

## Who should attend?

Technicians, maintenance and engineering personnel who requires knowledge and understanding on hose and flexible tubing selection, installation, inspection and best practices.



### PART NUMBER: TRAINING-HOSE

**Delivery** Classroom

**Practical Content** 20%

**Theoretical Content** 80%

## Course Content

- Hose and flexible tubing construction
- The components of a hose assembly
- Hose assembly identification
- Hose selection considerations
- Hose inspection considerations
- Troubleshooting and examples of bad practices in hose and flexible tubing installation
- Hose installation and inspection
- Practical activities in line with the industry guidelines
- Written assessment

**Course Duration:** Half day

**Maximum class size:** 15 attendees

**Prerequisite:** None

**Course Assessment:** Written and practical exams to measure participants' knowledge and skills.

**Training Validity:** Swagelok® Certificate of Completion with 3 years validity (Subject to successful completion of both practical and theoretical exam).

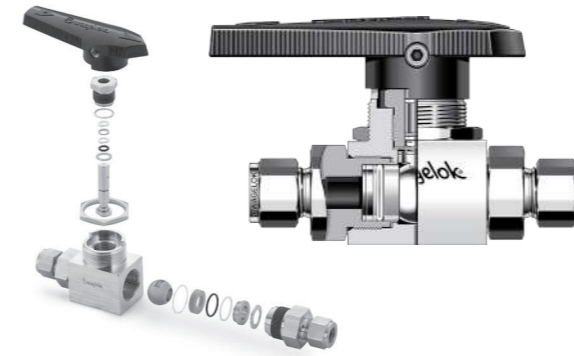
# SWAGELOK® VALVE ESSENTIAL TRAINING

## Course Aims

To provide foundational system knowledge that helps to reduce costs, ensure safety and extend production cycle in your valve systems by identifying proper valve types and functions, understand and identify constructions and common issues.

## Who should attend?

Technicians, maintenance and engineering personnel who require knowledge and understanding of how to choose the right valves for your applications.



## Course Content

- Identify valve types, functions, constructions, and operation
- Understand proper installation, repair, and troubleshooting of valves
- Define leakage and how to control the defined flow
- Understand the system's factors impacting the flow
- Identify and list factors affecting the service life
- How to read the flow curves and Pressure-Temperature tables
- Written assessment

### PART NUMBER: TRAINING-VALVE

**Delivery** Classroom

**Practical Content** 20%

**Theoretical Content** 80%

**Course Duration:** Half day

**Maximum class size:** 15 attendees

**Prerequisite:** None

**Course Assessment:** Written and practical exams to measure participants' knowledge and skills.

**Training Validity:** Swagelok® Certificate of Completion with 3 years validity (Subject to successful completion of both practical and theoretical exam).

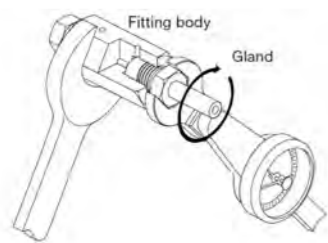
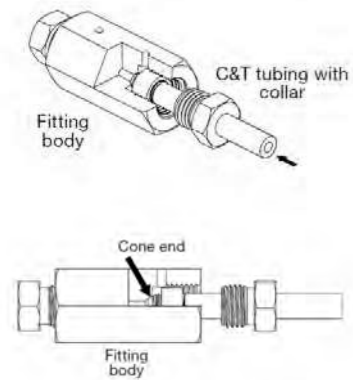
# SWAGELOK® MEDIUM & HIGH PRESSURE CONE & THREAD INSTALLATION ESSENTIALS

## Course Aims

The purpose of this course is to build up comprehensive understanding about cone and thread fittings in both medium and high-pressure design. It is important to differentiate the components between medium and high-pressure version. Proper tube selection, installation and inspection of coned and threaded tubing systems will also be provided in the course as well as its remedial action.

## Who should attend?

Technicians, maintenance and engineering personnel involved in the installation, maintenance, inspection and design of medium and high pressure coned and threaded tubing systems.



## Course Content

- Medium & high pressure tubing
- Cone & thread connections
- Medium & high sealing features
- Assembly procedure & torque values
- Component identification
- Needle, ball, & check valves
- Safety consideration
- Tube preparation & handling
- Written assessment



### PART NUMBER: TRAINING-CT

**Delivery** Classroom and Workshop

**Practical Content** 50%

**Theoretical Content** 50%

**Course Duration:** One day

**Maximum class size:** 15 attendees

**Prerequisite:** None

**Course Assessment:** Written and practical exams to measure participants' knowledge and skills.

**Training Validity:** Swagelok® Certificate of Completion with 3 years validity (Subject to successful completion of both practical and theoretical exam).

## Swagelok Indonesia (Main Office)

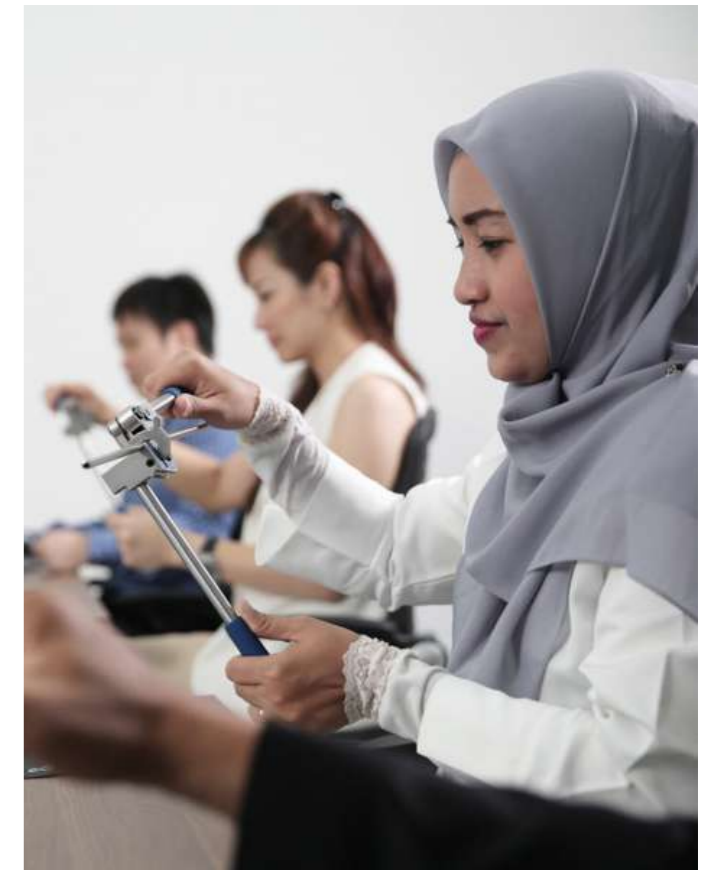
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## Swagelok Indonesia (Regional Office)

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## Swagelok Indonesia (Service Center)

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## ENGINEERED TO PERFORM UNDER PRESSURE

Swagelok Indonesia can provide you with a wide variety of service solutions. Our quality, performance and reliability will reduce your costs in designing, sourcing, installing and maintaining fluid system solutions.



indonesia.swagelok.com