

# Swagelok **ADVANCED TUBE BENDING**



Learn **TWO** proven and trusted Bending methods:

**Measure-Mark-Bend** and **The Swagelok Master Technique**



**Training that Meets Your Schedule:**

Select a 2.5-day, 3-day, OR 3.5-day learning event



**Train** at our leading-edge Pittsburgh Training Center OR enroll at least **FOUR** students and we'll bring our training course to your venue

## BENDING METHODS

### **The Measure-Mark-Bend**



The traditional basic way you've employed or heard about.

### **The Swagelok Master Technique**

For superior accuracy and aesthetics. You'll learn how to precisely mark all the locations of all bends in a tubing run – to determine the overall length of tubing required – prior to actually making any bends. **Best of all:** This process works for all bend angles.



### Types of bends we demonstrate, immediately followed by **YOUR** hands-on exercises:

- **Offsets** – Learn how to change the centerline of a tubing run.
- **Custom Offsets** – Figure out a bend angle less than 22.5° to enable you to make an offset bend.
- **Off-Plane** – For those times when bends must be rolled to a particular angle. See how to mark the tube before positioning it in the hand bender – to drastically reduce mistakes/waste.
- **Rolling Offset** – Know what to do if your tubing run is offset in the horizontal plane AND, at the same time, in the vertical plane? We can help you solve such a seemingly difficult challenge!
- **Segmented** – Have any idea how to bend a 1" tube around a 6' tank? See how to calculate equal leg lengths so you can ultimately make a 90° bend using four 22.5° bends. Yes, that certainly sounds complicated; we'll show you why it's not.



## SO, WHICH TIMEFRAME IS BEST FOR ME/MY CREW?

### **2.5-Day Course**

Learn at a comfortable pace, with plenty of time for hands-on exercises and personal tutoring.

### **3-Day Course**

Everything described in the 2.5-day course, but with our renowned **Tube Fitting Installation Safety** primer.

### **3.5-Day Course - your best overall value...**

Everything from our 3-Day course, but with added practice time to make challenging bends within a large electrical box to simulate real on-the-job conditions.



Meet your instructor:

**MIKE GAGEL**

- Swagelok Company veteran
- Strategic Services Specialist
- Certified tube-bending expert



**REGISTER TODAY** – Hurry, our training schedule is filling fast!

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**Swagelok**

Swagelok Pittsburgh | Tri-State Area