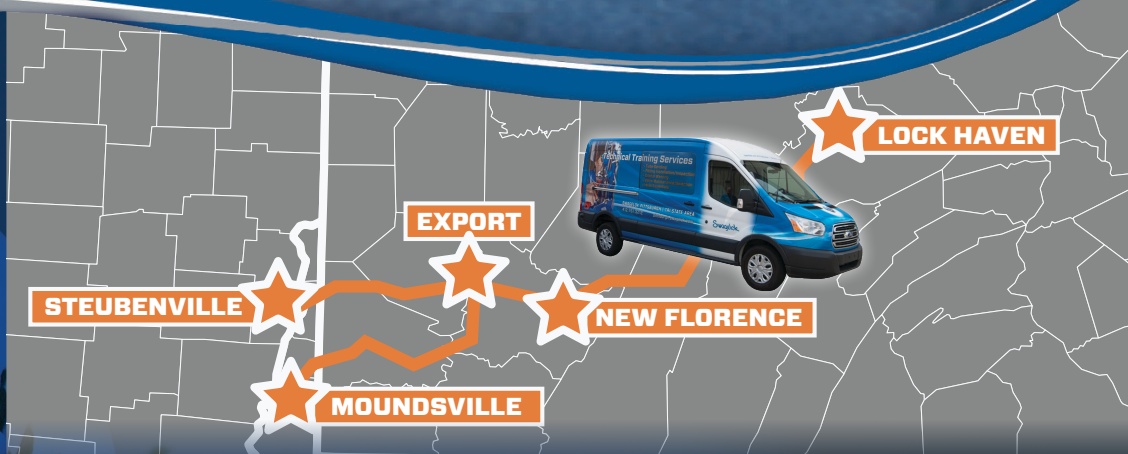


## Spring Training HIGHLIGHTS



The 2019 Major League Baseball season is well underway – and Swagelok Pittsburgh | Tri-State Area's mobile Technical Training crew has conducted a few noteworthy Spring events, too! In March and April, we've taught over 100 maintenance techs, engineers, apprentices, and operations staffers – in Moundsville, Lock Haven, Export, New Florence, and Steubenville – how to properly and safely pull up tube fittings, bend tubing of various materials, accurately size hose, choose the ideal valve for a particular application, and identify and repair problem connections around a loop.

Here are our current Swagelok Technical Training titles. We promise: You won't make a better investment in the safety and productivity of your maintenance personnel:

### Fitting Installation & Tube Bending Safety Essentials (8 hours)

- Get TWO Swagelok Certificates of Completion for just one day of training!

### Fitting Inspection Safety Essentials (4 hours)

- Work with a pre-assembled loop to identify and repair troublesome connections.

### Advanced Tube Bending (3.5 days)

- Learn how to make complex, rolling offset, and segmented bends.

### Hose Essentials (4 hours)

- Master key hose variables: Size, Temperature, Pressure...

### Valve Essentials (4 hours)

- Understand how to choose the ideal valve for your various applications.

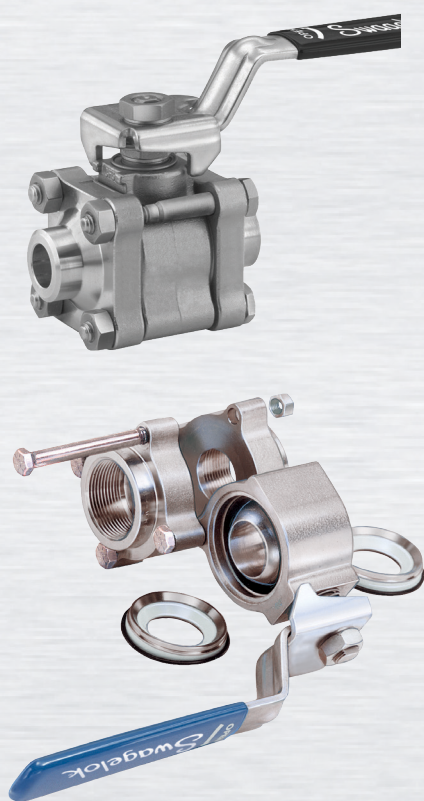
Unmatched content depth, unparalleled class variety, even a complete money-back guarantee – and always available at our Pittsburgh Training Center **OR** at your facility or project location!

## Presenting Our Low-E, Highly Versatile Performer

Swagelok's renowned quarter-turn **60-Series Ball Valves** – designed to be operated in a fully open or fully closed position – have been awarded an API 641 Test Certificate for Methane service. In addition to their low-emissions recognition, these premium-quality components feature a unique, swing-out design that enables fast and easy in-line maintenance....so there's no need to shut down your entire fluid system to, when necessary, replace worn seals. That means substantially less downtime labor and costs involved.

Available with a wide array of end connections and handles – and in your choice of stainless steel, brass, carbon steel, or special alloy bodies – our On-Off (2-way) and Switching (3-way) 1/8" to 2" 60-Series offerings are ideal for standard working pressures up to 2,200 psig and temperature ranges from -65° F to 850° F. A compensating seat design accommodates low/high cycling pressures. Seat material options include: Reinforced PTFE, Carbon/Glass PTFE, UHMWPE, Alloy X-750, PEEK, and Virgin PTFE.

Ask about our Special-Service models for steam, fire, low-temperature, rapid-cycle, chlorine, and all-welded applications!



## ALMOST SHOW TIME!



**Join us at the 47th Eastern Gas Compression Roundtable Annual Conference, May 21-23, at the David L. Lawrence Convention Center, Pittsburgh.**

Our **booth #426** will feature our latest Midstream product offerings, including Swagelok's innovative and configurable Differential Thermal Relief Valve Manifold design and high-efficiency small-bore piping solutions. We'll also be conducting two general courses: **Hose Basics** and **Tube Bending Basics**.

Admission to these two sessions – which will earn professional engineers Professional Development credits and provide all attendees a terrific opportunity to interact with others of similar interests – is included with the cost of your EGCR program ticket. Bring your questions....we'll look forward to speaking with you!



# THE TRUE COST OF LEAKAGE

**YES,** *leaks are commonplace within most manufacturing plants. But it's critical to immediately and adequately address even your smallest issues because:*

- Loss of fluid lubrication can lead to costly equipment damage (premature wear, machine failure...)...
- Production output potential – not to mention overall site profitability – is severely reduced every time you must shut down a process to fix a leak...
- Off-spec product could result due to improper instrument calibration caused by leakage...
- Oil drips from leaks could easily lead to an unsafe work environment (slips, accidents...)...
- Fugitive emissions can be expensive to repair and dangerous to employee health...
- Non-compliance fines are likely if systems and equipment violate safety regulations...
- Millions of gallons of hydraulic fluid are wasted each year; each gallon costs \$40 USD per...



**WHY** *do fluid-system leaks occur? Basically, there are three common causes:*

- **Unreliable metal-to-metal seals.** These can be especially difficult to manage over time as you try to keep and maintain the integrity of the seal. Precisely follow your chosen manufacturer's guidelines.
- **Improperly installed tube fittings.** Make sure your maintenance technicians are fully educated on how to properly and safely make up fittings, including how to correctly orient the ferrules – and how to employ a gap-inspection gauge to verify the fitting has been sufficiently tightened.
- **Poor tubing selection, handling, and preparation.** Tubing materials that are incompatible with your process fluid or operating environment are prone to corrosion, premature failure, and leaks. Plus, any tubing defects (uneven cuts, dents, scratches, or burrs) could compromise the fitting's ability to seal.

## **Here are the three primary types of fluid-system leaks:**

**REAL:** Result from the failure of a pressure barrier to contain or isolate a fluid from the surrounding environment. Usually occurs because of cracks in the material or gaps between sealing surfaces.

**VIRTUAL:** A release of internally trapped fluid into a system because of material outgassing, absorbed/adsorbed fluids, entrapment in crevices, or “dead legs.”

**PERMEATION:** Passage of fluid into, through, and out of a pressure barrier that doesn't have holes large enough to enable more than a small fraction of the molecules to flow through any one hole.

## **How can Swagelok Pittsburgh | Tri-State Area's Strategic Support Services Team help you spot, repair, and avoid system leakage, thus enhancing your workplace safety and Bottom Line?**

First, sign up for a no-cost **Energy Evaluation** that will classify and document your problematic connections by size and severity. We use a combination of visual, ultrasound, and film solution methodology to expose your dangerous and costly gas and/or air leaks. We then deliver a comprehensive report, chockful of expert repair/replace recommendations to enable you to achieve significantly improved system performance.

In addition, register for our **Fitting Installation & Tube Bending Safety Essentials** one-day course that teaches students how to safely and confidently pull up tube fittings and expertly bend tubing of various materials.

And, of course, our expert **Custom Fabrication** services offer unmatched consultation, design, and/or build assistance: sub-assemblies, simple assemblies, and large, complex instrumentation panels. All such work is performed by Swagelok-certified technicians – and is 100%-backed by the Swagelok Limited Lifetime Warranty.



An extra-special **Thank You** to all those who completed and submitted the recent Swagelok Global Customer Survey! Your thoughtful feedback will help us more quickly and effectively achieve our goal of becoming an even more trusted and resourceful local Swagelok Fluid-System Solutions Provider to you.

## CONTACT US

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