



## Our Systems for Your System's Success

### SWAGELOK APPLICATION SOLUTIONS

deliver unparalleled safety, performance, and economy, even in your most challenging operations

#### GAS DISTRIBUTION SYSTEMS



Our offerings enable you to get gases exactly where they need to go – from a high-pressure source to your facility at the expected pressure and flow rate your respective applications require.

#### SOURCE INLET CONNECTION

works to establish a secure linkage between the high-pressure gas source (gas cylinders or bottles) and your system.



#### POINT-OF-USE

provides the critical last stage of pressure control before gas is actually used.



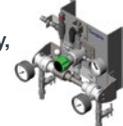
#### PRIMARY GAS PRESSURE CONTROL

completes the first pressure reduction of the source gas and ensures that such gas is delivered at the needed pressure within the required flow rates.



#### AUTOMATIC CHANGEOVER,

also known as continuous gas supply, is the first pressure control point and an uninterrupted gas supply.



#### GRAB SAMPLING SYSTEMS



#### Our GSM panels

employ a closed-loop methodology to pull from a positive-pressure process before returning to a process at a lower-pressure location – driving fluid via a differential pressure. Samples are deposited into durable, pressure-rated metal cylinders that prevent any sample escape or the likelihood of operator injury.

#### Our GSL panels

draw fluid into a non-pressure-containing bottle that has a self-sealing septum cap. Specifically for applications where process fluid is not at risk to fraction when stored at atmospheric pressure.



Always Exceeding Your Expectations, our Grab Sampling Panels are designed for:

**SAFETY** We prevent overfilling or overpressure conditions.

**EASE OF USE** We reduce the number of required sequencing steps.

**CONVENIENCE** We offer fixed-volume versions of our GSM and GSL systems.

**RELIABLE RESULTS** We provide fresh samples to cylinders that hold samples at the same process conditions present at sampling.

**LONG SERVICE LIFE** We expertly custom-build and test panels to ideally support your specific sampling needs.

#### MECHANICAL SEAL SUPPORT SYSTEMS



#### Seal Plan Kits

- Bent tubing is used versus leak-prone threaded connections
- Can be designed to your specific site requirements
- Ensure installation of high-point vents and low-point drains
- Complete component packages available for **API Plans 11, 12, 13, 14, 21, 22, 23, 31, and 41**...and for **Atmospheric Side Plans 51, 62, 65A, and 65B**
- **API 682** standard design

#### Seal Plan Assemblies

- Panels, Seal Pots, or Skids
- Numerous configurations available to meet your specific site/application requirements
- Can be ordered separately or with an associated Field Installation Kit
- Available for **Side Plan 32**...and for **Between Seal Plans 52, 53A, 53B, 53C, 54, 55, 72, 74, 75, 76, and 72/76**
- **API 682** standard design

Premium-quality, leak-tight Swagelok Instrumentation Panels are designed and built **LOCALLY** by our Swagelok-trained-and-certified master technicians. Our work is fully covered by the renowned Swagelok Limited Lifetime Warranty:

- Gas Purge Panel and Enclosures
- Distribution Manifolds
- Custom Flex Hose Assemblies
- High-Volume Bent Tubing Assemblies
- Sample Cylinder Assemblies
- Standard Instrumentation Mounting Kits
- Ultra-High-Purity Welded Manifolds
- High-Pressure Test Stands
- Simple and Highly Complex Tube Bending
- Instrumentation and Transmitter Assemblies/Enclosures
- Heat Exchanger Tubing Coils
- Gauge Block-and-Bleed Valve Assemblies
- Automated Ball Valve Assemblies
- Pre-Set Relief Valves
- Maintenance Programs: Sample Cylinders and Flexible Hoses
- CAD and P&ID Design Assistance
- Orbital Welds

We can help you save time, money, and worry when your production schedule is tight.



5,000-square-foot Working and Staging Area



5-ton Overhead Crane, with 18-foot clearance

- Dedicated Swaging, Bending, Coiling, Orbital Welding, Kitting, Packaging/Wrapping, Inspection, Testing, and Cleaning Stations
- Climate-Controlled Environment

# BE SAFER Next Year



*There is a “right” way to keep your maintenance technicians safe, efficient, and always confident in their ability to construct a fluid system. That quest starts with a complete understanding of the latest tube fitting installation and tube bending best practices.*

## Presenting our highly hands-on Safety Essentials Training:

**In just one day**, we’ll teach you how to safely and properly pull up tube fittings, bend tubing of various materials and diameters, and master overall system knowledge to ensure operational integrity and performance...with absolutely minimized leakage.



**In addition**, you’ll prepare, cut, and debur tubing; inspect tubing; and discuss in-depth your common/everyday system challenges, errors, and issues.



### YOU WILL PRACTICE, PRACTICE, PRACTICE –

graduating with the confidence that you can now do your job better and more safely than ever!



Plus, we supply ALL training materials... and can conduct your session at **your work or project site**.

We can start/stop at your hours of convenience. And, best of all, students receive Swagelok certification in each discipline: Swaging and Bending.

We can even customize our content to your specific applications and challenges.



### Our full library of productivity-boosting Customer Training class titles:

- Tube Fitting Installation & Tube Bending Safety Essentials
- Tube Fitting Inspection Essentials
- Advanced Tube Bending
- Hose Essentials
- Valve Essentials
- Orbital Welding
- Process Analyzer Sampling Systems
- Sampling System Problem-Solving & Maintenance
- Analyzer Technician Essentials
- Steam & Condensate Essentials
- Materials Science

### FROM A FEW RECENT PARTICIPANTS:

“The training was put into layman's terms; the instructor held my interest the entire day...and the hands-on learning experience was exceptional.”

“I know now that I can do any bending required in our shop.”

“This class enabled me to truly understand WHY things are done a certain way, not just HOW.”

“Talk about learning how to greatly reduce scrap and waste!”

“I think everyone can gain valuable maintenance insights from this class – no matter what your current skill level.”

**DON'T DELAY...SIGN UP TODAY:**

**CALL OR TEXT 412.439.1706 OR EMAIL [RUDY.FRANK@SWAGELOK.COM](mailto:RUDY.FRANK@SWAGELOK.COM)**

# LEAKS = LOSS...

*...of fluids, uptime, output, product integrity, workplace safety...*

Even the smallest, seemingly innocuous leakage can lead to major operational issues, including total system shutdowns for maintenance and/or inspections.

Here are six ways and means to stay safe, stay running, to stay ahead of demand:

- Our premium-quality **Componentry** is globally renowned for unparalleled performance in even the most challenging Oil and Gas, Chemical, Steel, Clean Energy, Power, General Industrial, and Research-and-Development applications



- Our **Design-and-Build Shop** produces instrumentation panels, sub-assemblies, skids, and enclosures that are leak-tight, tested, inspected, and professionally packaged for simple installation and maintenance



- Our **Customer Safety Training** programs ensure that your technicians – new hires to veterans – know how to safely and properly pull up tube fittings and bend tubing of various lengths and materials



- Our **Energy-Loss Evaluations** provide you a comprehensive snapshot of faulty connections and dangerous leak points in your lines – with expert recommendations on how to quickly remedy the issues that are costing you the most time, money, and worry



- Our **Industrial Hose Advisories** will give you an accurate assessment of current sizing, routing, and storage practices and concerns, plus offer ideal going-forward suggestions on which types of hoses to use for which applications



- Our vast **Technical Application Know-How**, through your local Swagelok representative or our inside sales and service team, will help you consider and choose the “right” tool for the job



## PRODUCT SPOTLIGHT

### Quick-Connects

Enable quick, simple operation without twisting, turning, or wrenching



- Design minimizes spillage and air inclusion
- Push-to-connect design enables easy operation
- Wide variety of configurations, end connections, and stem and body connectors
- **Types:** Instrumentation, single-end shutoff, double-end shutoff, full-flow, miniature, PTFE-sealed

## SERVICES SPOTLIGHT

### Bench Top Tube Benders

#### Features

- Rugged, lightweight aluminum construction
- 1° to 180° bending range ¼" to 1 ¼" outside diameter (0.028" to 0.120" wall thickness) and 6mm to 30mm outside diameter (0.8mm to 3.0 mm wall thickness) tubing range
- Steel shoes included
- Includes grease gun and metal carrying case for storage
- Manual model can be operated with a ½" drill motor using optional torque clutch and support arm
- CE marked
- UKCA marked





# PRODUCTIVITY POINTER



Expert advice on exactly which Sampling methodology you'll require **IF:**

**Floor space is limited:**  
**GRAB SAMPLING**

**WHY?** Online analyzers require housing, generally taking up significant real estate, with ambient environmental conditions tightly controlled.



**Budget is limited:**  
**GRAB SAMPLING**

**WHY?** Online analyzers require a substantial investment to build shelters and sophisticated sampling systems to prepare samples for analysis.



**Large fluid system requiring numerous sampling points:**  
**GRAB SAMPLING**

**WHY?** Grab sampling panels can be easily installed directly onto the process line wherever samples must be taken. No tube or piping routing to the analyzer required.



**Process rate of change is exceptionally slow:**  
**GRAB SAMPLING**

**WHY?** If a lengthy amount of time between process draw and lab analysis is acceptable/common due to a slow rate of change of conditions at your facility, grab sampling is far more cost-effective.



**Your sample has a heavy particulate load:**  
**GRAB SAMPLING**

**WHY?** Online analyzers require filtration to ensure accuracy and eliminate clogs. If your process is particularly dirty, that's a special challenge.



**Field atmospheric conditions vary:** **GRAB SAMPLING**

**WHY?** Grab sampling enables samples to be conveniently tested in a highly regulated and controlled lab environment.



**Hazardous materials are involved; human exposure must be limited:**  
**ONLINE ANALYZERS**

**WHY?** Grab sampling requires operators manually collecting media in bottles or cylinders.



**Time delay must be minimized:**  
**ONLINE ANALYZERS**

**WHY?** Online analyzers can analyze samples in real time... often within a minute – crucial when system media could quickly change phase or be otherwise compromised.



**Maintaining sample temperature is a high priority:**  
**ONLINE ANALYZERS**

**WHY?** Simply, no method exists to maintain sample temperature inside cylinders. But, tubing involved with an online analyzer can be heat-traced to regulate temperature.



**Sample purity is a major priority:** **EITHER**

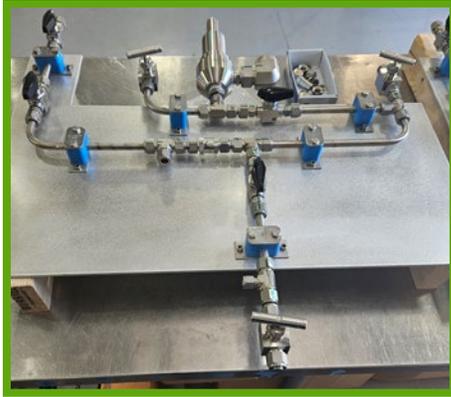
**WHY?** Contamination could occur in either method; it's imperative that your system is safely and properly designed and a rigid maintenance schedule is administered and followed.





# Making Our Case(s)

More recent examples of how Swagelok Products and Services helped make a genuine difference in customer safety, productivity, efficiency, and profitability:



## Challenge

A maker of industrial and environmental machinery took on a major project that incorporated assembled premium-quality nitrogen purge panels. But designing and choosing components for such were not this OEM's core business nor competency.

## Solution

Customized leak-tight panels were outsourced to our Local Swagelok Design & Build team, enabling our customer to redeploy its limited internal resources to other critical aspects of the project. Our assemblies drastically reduced leakage potential by minimizing the total number of threaded connections involved – resulting in the ultimate end user's greatly enhanced efficiency.



## Challenge

A major refinery was spending excessive time, money, and effort to control fugitive emissions (Volatile Organic Compounds). Its pumps – with complex seal systems that included numerous pipe attachments with multiple joints – were simply leaking far too much, overextending the site's maintenance budget and labor crews.

## Solution

Swagelok customized 4" and 6" Extended Male Connectors were substituted for the pipe joints, enabling one-piece linkages between the gland and the tubing run – thus eliminating numerous potential leak points via a single fitting.



## Challenge

A major maker of pumps and compressors for the global mining, chemical, and power generation industries needed to find new Check Valves and more that would ensure stable and reliable compressor operations in harsh industrial environments. Overall, our customer was determined to identify and deploy multiple products – manifolds, instrumentation valves, tube fittings... -- for significantly improved pressure control on its panels.

## Solution

Local Swagelok Design & Build Services was contracted to help develop compressor control panels, each with five manifolds and 20 connections. All have maintained a virtually leak-free record. In addition, our account signed up for several Swagelok Tube Fitting Installation & Tube Bending Safety Essentials classes to ensure that all maintenance technicians knew the latest and most proper ways to build safe/ultra-reliable fluid systems.

# INSIDE JOB



**One of our Design & Build Shop's core competencies: *Orbital Welding.***

**All three of our master technicians are Swagelok trained-and-certified.**

**Here, Nate Rothert, Fabrication Projects Coordinator (standing), and Andy Tedesco, Services Specialist, work together to ensure proper alignment of a valve and bent tube prior to a permanent weld. Such assembly was then placed into one of our leak-tight, premium-quality panels.**

## ***What We Want from You:***

*To be the fluid-system experts you rely on, especially in your toughest, most challenging applications*

## ***What You Should (Always) Expect from Us:***

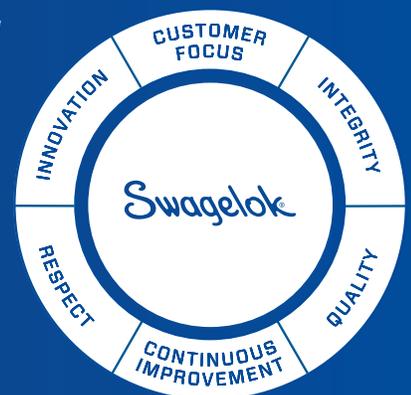
*To be able to rely on our renowned, revolutionary, and leak-tight Tube Fittings, Valves, Pressure Regulators, Industrial Hoses, Gauges, Instrumentation Assemblies, Tubing, and other components for exceptional output in virtually any environment*

*To be able to tap into our deep system insights and analysis to learn how to rapidly decrease downtime, cut operational costs, and secure/maintain a safe workplace*

*To know that our components are made from the finest raw materials, on leading-edge manufacturing equipment, run by highly trained and fully certified technicians*

*To know that we will have the products right when and where you need them due to our supply chain commitments and strong supplier relationships and stocking positions*

*To know that collaboration with you is essential to our everyday endeavors – whether simple subassemblies or large, complex design and build projects*



# Your Productivity-Boosting Starting Lineup

Visit [pittsburgh.swagelok.com/Resources](http://pittsburgh.swagelok.com/Resources) to check out our new **LINE CARD**

The collage features three main elements:

- Swagelok Pittsburgh | Tri-State Area Website:** A screenshot of the website's 'RESOURCES' page, with a red circle around the 'LINE CARD' link and a red arrow pointing to the 'LINE CARD' document.
- OUR PRODUCTS Catalog:** A detailed catalog listing various Swagelok products such as Fittings, Hoses and Flexible Tubing, Valves and Manifolds, Analytical Instrumentation, and Pre-Engineered Subsystems.
- LINE CARD Document:** A document titled 'OUR STRATEGIC SUPPORT SERVICES' that lists services like Custom Fabrication, Safety Training, Tool Rest, Hose Advisories, Energy-Loss Evaluations, Relief Valve, and MUST READS (Case Studies, Email Blasts, Tech Tips).

Our new **LINE CARD** includes clickable links to all the Swagelok Componentry we stock and sell, plus our supplementary Swagelok Strategic Support Services and helpful digital tools!

## YOUR REPOSITORY OF EXPERTISE

Read our continually updated online library of proven and trusted tips on how to significantly improve your system safety and productivity.



VIEW OUR TECHNICAL ARTICLES  
[pittsburgh.swagelok.com/en/resources/technical-articles](http://pittsburgh.swagelok.com/en/resources/technical-articles)



VIEW OUR CASE STUDIES  
[pittsburgh.swagelok.com/en/resources/case-studies](http://pittsburgh.swagelok.com/en/resources/case-studies)

# UP AGAINST YOUR WALL



Your local Swagelok Pittsburgh | Tri-State Area Sales Representative will make sure that you soon receive your 2026 Swagelok wall calendar.

For extra copies, please  
text: **412.439.1706**  
or email: **rudy.frank@swagelok.com**



*Put our team alongside yours*

**YOUR LOCAL  
FLUID-SYSTEM EXPERTS**

*Put our team alongside yours*

**Swagelok**  
PITTSBURGH.SWAGELOK.COM  
412.761.3212

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**JANUARY 2026**

KEY TO SYMBOLS  
 ☞ Total Days Worked in the Year  
 ☞ Working Days Remaining in the Year  
 ☞ Working Days Remaining in the Year  
 ☞ Working Days Remaining in the Year

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1 NEW YEAR'S DAY	2	3 FULL MOON
4 NEW YEAR'S DAY	5	6	7	8	9	10 LAST QUARTER
11	12	13	14	15	16	17
18 NEW MOON	19	20	21	22	23	24
25 FIRST QUARTER	26	27	28	29	30	31

JANUARY FEBRUARY MARCH APRIL MAY JUNE  
 JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

*Best Wishes for a Safe and Prosperous 2026 from  
Swagelok Pittsburgh | Tri-State Area!*

**SWAGELOK PITTSBURGH | TRI-STATE AREA**  
YOUR LOCAL FLUID-SYSTEM EXPERTS

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