

# Systemized Optimization

## Part 1



**Swagelok Application Solutions** are your first choice for unparalleled safety, efficiency, and performance, no matter your industry or fluid-system challenge.

# GAS DISTRIBUTION SYSTEMS

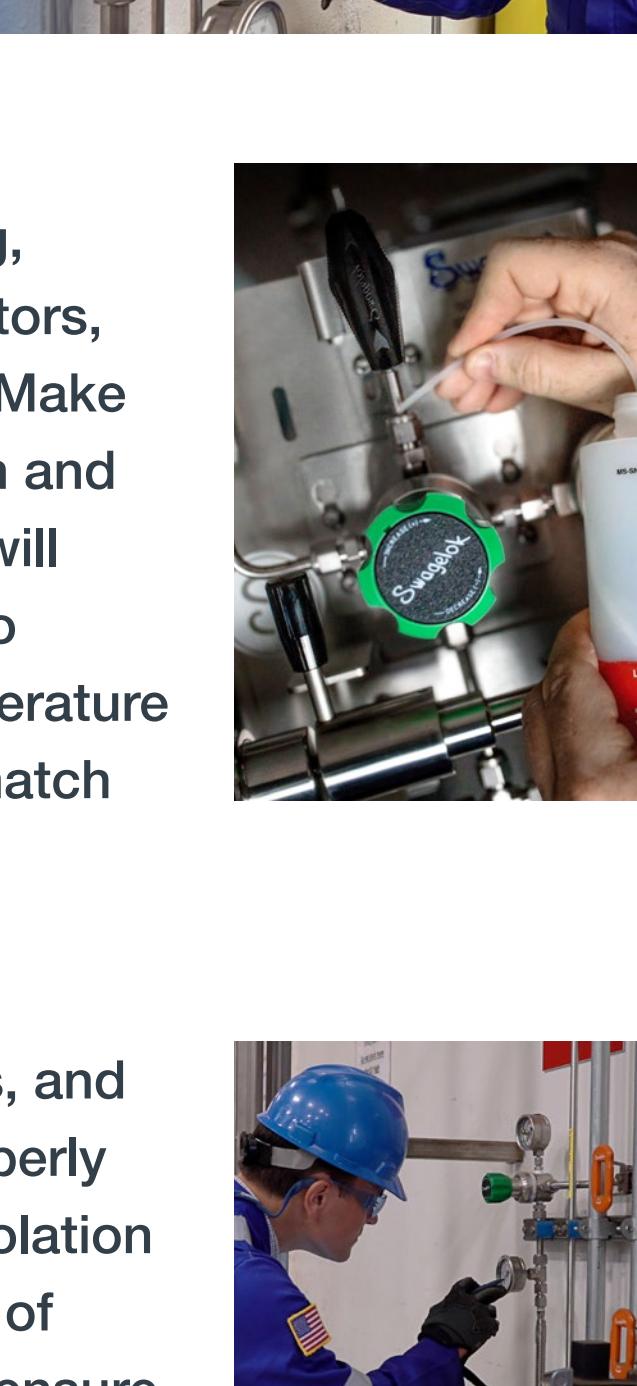


Our offerings enable you to get gases exactly where they need to go – from a high-pressure source to your facility at the expected pressure and flow rate your respective applications require.

**4 SUBSYSTEMS** could potentially be involved:

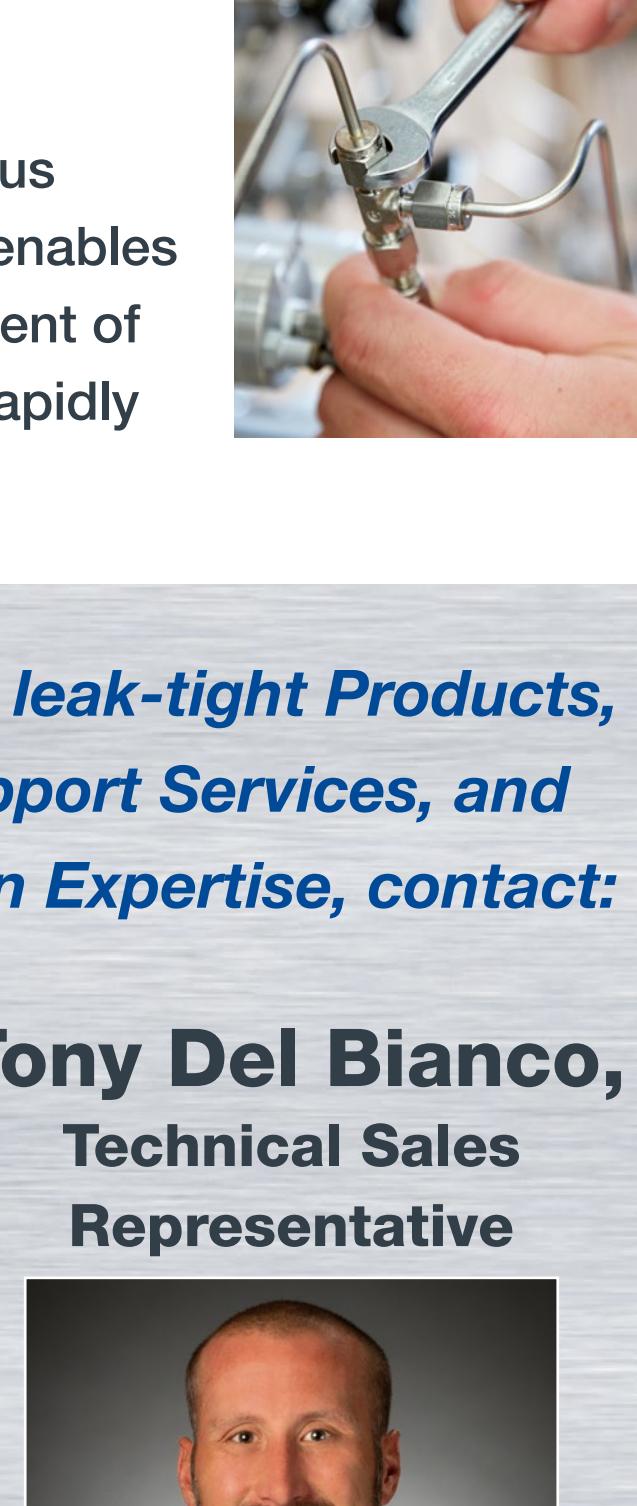
### SOURCE INLET CONNECTION

works to establish a secure linkage between the high-pressure gas source (gas cylinders or bottles) and your system. It must be built with the appropriate cylinder connections, hoses, tubing, filters... plus vent, purge, and relief functions...to ensure the gas can be safely fed into the primary gas pressure control or automatic changeover systems.



### POINT-OF-USE

provides the critical last stage of pressure control before gas is actually used. Usually consists of a pressure regulator, gauge, and isolation valve to give operators a convenient and accurate method of adjusting pressure to meet test bench or equipment needs.



### 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. Reduction is accomplished in either one stage (with a single regulator) or two stages (via dual pressure regulators).



### AUTOMATIC CHANGEOVER,

also known as continuous gas supply, is the first pressure control point and an uninterrupted gas supply. Seamlessly switches from one gas repository to another through staggered set points of two pressure regulators – thus ensuring a system can continue operating as the primary gas source changes from one bottle to another.

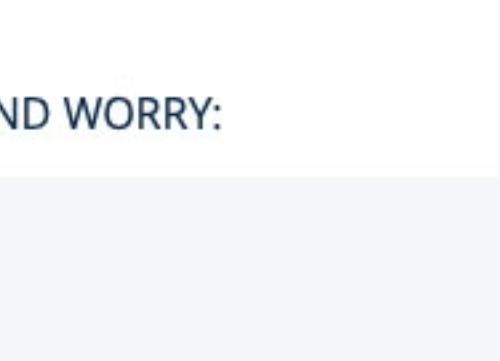


### WHEN CHOOSING YOUR SYSTEM, CONSIDER:



#### SAFETY:

Gas distribution systems, if leaking, can be extremely harmful to operators, equipment, and the environment. Make sure to carefully choose the design and components for your system that will deliver trouble-free operation. Also ensure that the pressure and temperature ratings of any selected products match system requirements.



#### RELIABILITY:

Process conditions, test standards, and equipment needs change – so properly sizing pressure control and flow isolation components to meet a wide range of operating parameters is critical to ensure your system can be effective without modifications as such needs change.



#### EFFICIENCY:

Gas can be costly...so leaks equal wasted money, especially when the media is helium, hydrogen, or the like. Threaded connections, in particular, are prone to leakage; compression fittings are a superior choice.



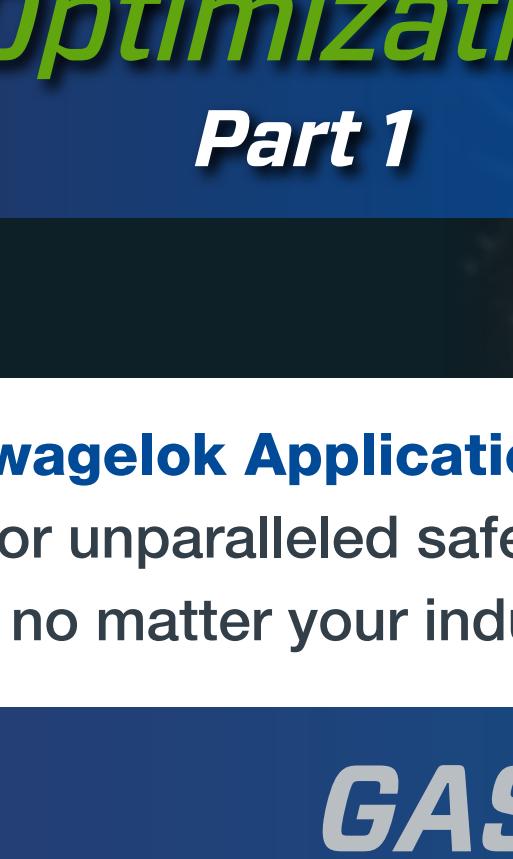
#### TIME:

When a system fails to function as expected, troubleshooting and maintenance are necessary. It's thus essential that your system design enables quick access and simple replacement of components so your site can be rapidly up and running again.



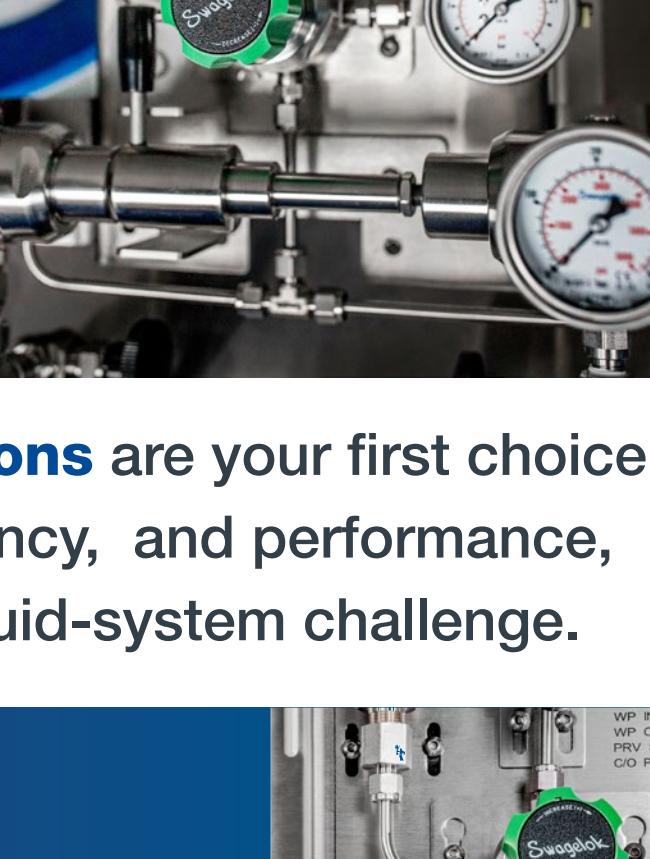
For full details on Swagelok leak-tight products, value-added Strategic Support Services, and overall Technical Application Expertise, contact:

**Tim Davis,**  
Application  
Engineer



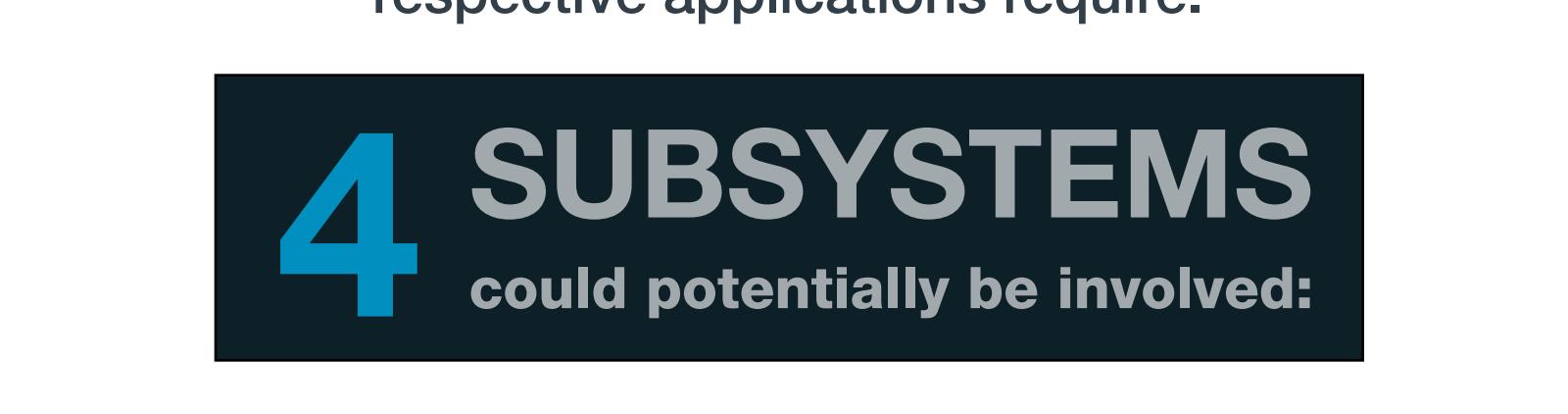
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**Put our team alongside yours**



**WE DELIVER DIFFERENCE-MAKING SOLUTIONS:**

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Comprehensive

Management Support

Extensive Energy Evaluations