

Safely and Accurately Validate
Process Conditions, Confidently
Verify Product Specs

Gas grab sampling presents unique challenges to operators attempting to obtain an exact, real-time read of true process conditions.

Solution:

Swagelok Best Practices for sampling gases and volatile liquids can help ensure that the composition of your samples is not altered between extraction and analysis. More importantly, ***we present proven guidance on how to keep your operators and operations safe.***

Top 10 Recommendations for Grab Sampling Safety and Productivity:

1. *Your sample must represent your process...*

...use probes to draw samples from the middle of the process pipe to avoid changes during transportation.

2. *Your sample must be timely...*

...eliminate unnecessary steps between draw point and laboratory to ensure an accurate, representative sample.

3. *Your sample must be pure...*

...avoid dead legs upstream of the container and facilitate adequate purging and flushing.

4. *Use sample Cylinders – versus unpressurized bottles...*

...to safely collect gas and volatile liquid samples to maintain correct phase and preserve a representative sample



Sample Cylinders

5. Work with your Cylinder supplier...

...to choose the optimum type for your process.

6. When selecting Cylinders, here are a few key considerations...

...easily operable **quick-connects** for safe/efficient connecting and disconnecting from sample point; a smooth **internal neck transition** to eliminate trapped fluids and ensure quick clean-ups and reuse; proper **material composition and finish** to handle special alloys that might be required due to the sampled liquid; incorporated **bypass lines** to purge toxic remnants and enhance tech safety; durable **design and construction** to withstand lengthy transports to lab.

7. Fill your sample Cylinder in a vertical orientation...

...if sampling a volatile liquid, go from the bottom to the top.

8. Employ gas grab sampling panels...

...to **absolutely minimize the potential for human error**, to ensure that cylinder is in proper orientation, and that your sample is drawn top-down. Same is true for liquid sample panels.

9. A geared valve assembly...

...as part of a panel, ensures valves are opened in the correct sequence; no need for operator to manually open/close such components. Adding a purge function to the assembly, guarantees purged fluids cannot re-enter the main process.

10. Employ a standardized panel design...

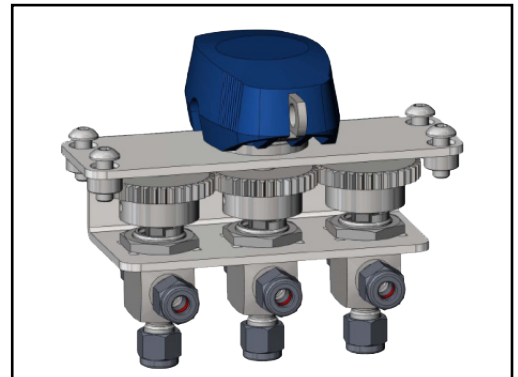
...at every sampling point to promote process consistency, while eliminating possible confusion, across your facility.



Quick Connects



Grab Sampling Panel



Geared Valve Assembly

Support:

For the complete story, visit www.swagelok.com/en/blog/gas-grab-sampling

For more information, contact:

Gary Osman, Swagelok Field Engineer

gary.osman@swagelok.com • 412.761.3212



P: 412.761.3212 W: pittsburgh.swagelok.com

 @SwagelokPGH

 SwagelokPittsburgh

 Swagelok Pittsburgh | Tri-State Area

All service marks and trademarks shown are owned and registered by Swagelok Company. © 2021 Swagelok Company. www.swagelok.com

Swagelok®

Swagelok Pittsburgh | Tri-State Area