TRACE
a Velaris brand

GLS*Plus* & GBS

Advancing Automation Together

GLS*Plus* & GBS

GAS & LPG SAMPLING SYSTEMS

Enhance efficiency, accuracy, and reproducibility in laboratory workflows

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Next Generation Gas & LPG Sampling Systems

TRACE's Next Generation Gas & LPG Sampling Systems: the GLS*Plus* and GBS

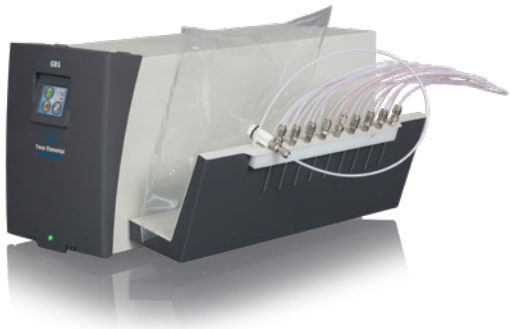
Analyzing gas and liquefied gas is often considered difficult and problematic. The choice of sampling technique and the ability to handle different gases at various pressure levels and physical states present significant challenges. TRACE has developed two innovative sampling systems designed to simplify gas and LPG sampling:

The GLS*Plus* (Gas & Liquefied Gas Sampling module) for advanced sampling of gas and LPG from pressurized cylinders and gas sampling bombs, now with extended pressure capability, enhanced material protection, and significantly improved performance. Additionally, a third sampling channel is optionally available to sample from even non-pressurized gas bags.

The GBS (Gas Bag Sampling module) for sampling gas from gas bags (e.g. Tedlar™ bags).

The GLS*Plus* and GBS form a perfect match together with the Xplorer*Plus* combustion analyzers for the measurement of Total Nitrogen, Total Sulfur, and Total Chlorine, and the Xprep C-IC for the analysis of Total Fluorine, Chlorine, Bromine, and Iodine.

Configuration: GLS*Plus* with safety lock



Configuration: GBS

Taking Simplicity to the Next Level, Now Even Further

GLS*Plus*; Pressurized Gas & LPG Samples

The GLS*Plus* is the enhanced evolution of the proven GLS platform, designed to handle more demanding LPG and gas applications with greater speed, safety, and robustness.

Higher Pressure Capability — Now Standard up to 100 Bar

The maximum pressure for LPG materials is now 100 bar as standard, allowing direct handling of high-pressure LPG samples without modifications. Improved headspace handling in cylinders results in more effective flushing and purging, ensuring better management of samples containing heavy fractions.

Built for all LPG sample Materials

The LPG section of the GLS*Plus* is specially protected for aggressive media:

- All tubing is coated as standard
- New LPG purge valve based on PEEK/PTFE, providing near-inert performance
- Improved resistance against exotic and corrosive components

This significantly enhances durability, reliability, and uptime in challenging applications.

New Mixing Vessel & Evaporator Design

The completely redesigned mixing vessel and evaporator setup provides:

- Less required sample material
- Faster flow-out and purge-out
- Reduced carry-over
- Improved reproducibility

Faster Analysis

Thanks to the new mixing vessel design, LPG analysis is up to 50% faster compared to the classic GLS. Additionally, RSD values are improved, providing better repeatability and more reliable results.

Enhanced Filtration & System Protection

The GLS*Plus* is equipped with:

- Inline filters for both LPG and Gas channels
- Additional gas filter protecting the gas side
- Denser pore structure for superior particle retention
- Easy-access filter compartment behind the front cover

Optional Third Channel — Non-Pressurized Gas

A new optional feature adds a third channel for handling non-pressurized gas samples (e.g. from Tedlar™ bags).

This offers:

- Greater flexibility
- More economical system configuration
- Competitive advantage in tenders and projects
- The possibility to combine pressurized and non-pressurized gas sampling within one platform

GBS; Atmospheric Gas Samples

Compared to sampling gas using a pressurized cylinder, the GBS samples directly from a gas bag, eliminating the need to pressurize samples and enabling fast and cost-effective analysis.

The GBS can connect up to 10 gas bags simultaneously and analyze them sequentially. This provides:

- Higher productivity
- Reduced contamination
- Reliable and repeatable results

Ease of Use: No Pressure

Communication between the PC and the GLS*Plus* or GBS runs via a USB port. Within minutes, the sample is measured and the final result is calculated and stored for evaluation.

All sample methods can be customized as desired by the operator. Parameters such as temperature, flow, and pressure are automatically controlled and continuously monitored.

Safe, Reliable, and Robust

Gas samples are often highly flammable. To ensure maximum safety:

Both the GLS*Plus* and GBS are equipped with a gas leakage sensor that continuously monitors the internal atmosphere of the sampler.

If hydrocarbons are detected:

- All activity is aborted immediately
- Sampling gas and carrier gas flow are stopped
- The user interface indicates the alarm
- Safety measures are activated

After inspection and correction, the system can be reset via the touchscreen.

Configuration: GLS*Plus* with safety lock

Advanced Safety Lock

Advanced Safety Lock on GLS*Plus*

The GLS*Plus* automatic safety mechanism detects pressure between the sample cylinder and the sampler.

- As long as pressure is present, removal of the cylinder is prevented
- Once pressure is released and vented, the safety lock disengages automatically

This ensures safe handling of high-pressure cylinders up to 100 bar.

Truly Unique: Calibration from a Single CRM

Both the GLS*Plus* and GBS can generate a full calibration line from a single certified reference material (CRM).

GBS

- Selects different volumes from 10 to 1000 mL
- Automatically introduces them as individual calibration samples

GLS*Plus*

- Uses built-in sample loops
- Multiple loops generate a full calibration line
- Up to 100 sample loops via the embedded interface or TraceLINK software

This automatic calibration mode reduces operator workload while ensuring optimal calibration performance.

Configuration: Xplorer*Plus* with Vectra and GLS*Plus*

Specifications

GBS Specifications	
Dimensions (W x H x D)	37.0 x 28.5 x 56.0 cm (14.6 x 11.2 x 22.0 inch)
Weight	15.3 kg (33.7 lbs)
Carrier gas connection	⅛'' Swagelok
Carrier gas	Argon or Helium (3.5 - 8 bar)
Primary pressure gas sample	Atmospheric pressure
Calibration	Auto calibration single & multi-channel
Sample	Up to 10 sample bags
Sample volume	10 - 1000 mL
Operation mode	Fully software-controlled
Vent gas connection	¼'' Swagelok

GLS^{Plus} Specifications	
Dimensions (W x H x D)	30.0 x 28.5 x 56.0 cm (11.8 x 11.2 x 22.0 inch)
Weight	18 kg (39 lbs)
Carrier gas connection	⅛'' Swagelok or 4 mm direct coupling (MFC)
Carrier gas	Argon or Helium (3.5 - 8 bar)
Primary pressure gas sample	Up to 50 bar
Primary pressure liquefied gas	Up to 100 bar
Secondary sampling pressure (gas)	2 - 5 bar (29 - 72 psi) gauge; adjustable
Secondary sampling pressure (LPG)	Automatically controlled vaporizer
Evaporation temperature	Ambient up to 100 °C
Sample loops	3 mL gas; 30 µL liquefied gas
Optional third channel	Non-pressurized gas samples
Calibration	Auto calibration from a single CRM
Operation mode	Fully software-controlled (TraceLINK)
Vent gas connection	¼'' Swagelok

Get in Touch!

Visit our website

Additional information can be found on our website

www.trace-instruments.com

Ask a Question

Contact us via E-mail and we will get back to you as soon as possible

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Call us

If you require direct assistance, don't hesitate to call us!

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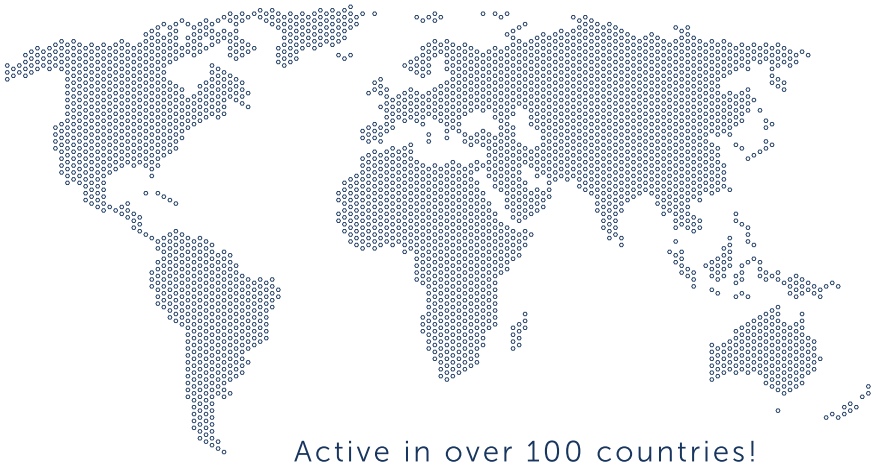
Worldwide automation solutions



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