

AlyTech GASMIX

On-site Customized Gas Preparation - Accurate and Repeatable

Generate Gas Standards from Liquids

Automatic Mixing / Blending and Dilution of Gas and Liquid Standards

Today more and more analytical laboratories require calibration standards from compounds which are liquid at room temperature. Aromatics such as, Benzene, Toluene and Xylene (BTX) along with many other organic solvents or Siloxane can be difficult to acquire. In many cases some may have a very short shelf life due to stability issues associated with gas cylinders. Research and development into new fields like biogas are requiring more and more of these types of standards. The challenges for the calibration laboratories is finding, preparing and maintaining the quality of these standards for their analysis.

AlyTech GasMix for Liquids™ On-site Gas Preparation System

The AlyTech GasMix for Liquids™ was developed to provide a solution for on-site gas standard preparation for customers who require aromatic standards that are in gas phase. This innovative new product incorporates the strengths of popular GasMix™ that is used for on-site customized gas standard preparation for single and multi-point calibration standards. The GasMix for Liquids™ has all those capabilities and more by engineering the system so that it can evaporate a liquid standard in a controlled way into a gas stream. This provides the ability for lab personnel to generate a range of standards at different concentrations.



the temperature set points for the evaporator and the heated lines. This ensures that the newly generated gas standard is kept in a gaseous phase up to the injection point of the analyzer or any other delivery point. System operators will easily master the GasMix CalibrateIT software; it was designed and built for ease of operation, and at the same time allowing for the capacity of running from a single injection to a fully automated operation, through an automated sequence. The built in audit trail function ensures total traceability of each operation. Regular automatic sequences may be saved and recalled at any time.



GasMix™ CalibrateIT Analysis Software



The custom designed software continuously monitors and controls mass flow controllers (MFC's) and allows an automatic generation of gas mixtures in a programmed sequence. Dry contact closures or digital contacts ensure the software can be either remotely controlled, or send a signal in order to drive an external valve or start a third party analyzer. Automation of the process provides real time-saving for the operator. The GasMix software controls

Benefits of the GasMix for Liquids™

- Generates Gas standards starting from gases, and one liquid phase
- Linear Calibration Curves
 - Mass Flow Controllers provide accurate measurements
- Heated line up to the delivery point in the Analyzer
 - No cold zone, prevents condensation
- Built in Automation
 - Reduces Operator Time - Designed to run without operator intervention
 - AlyTech CalibrateIT Software automates the process; just connect the gas lines and the liquid source; and the software will do the rest
- Return on Investment
 - Studies prove that the GasMix™ will pay for itself in less than one year
- Unique Solution
 - AlyTech has combined the power of the latest MFC technology and their proprietary software in one device for linear, accurate and repeatable gas standards preparation.

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Application Spotlight Biogas Valorization

Produced by landfills and sewage digesters, Biogas is an excellent source of renewable energy for electricity generation. The composition of biogas is complex, and traces of pollutants and/or contaminants containing Silica for instance, may be found. Therefore many applications using biogas as a fuel are not possible. An example would be siloxanes, which at high temperature, are transformed into silicon oxides. These oxides are very hard materials which can damage the metal surfaces of an engine. Monitoring and eliminating these particles is the essential for this production to become viable and profitable. Gas Chromatography (GC) is used to evaluate the efficiency of a siloxane remover process. The analyzer must be calibrated both at high levels (before the siloxane removal process) and low end, when the gases have gone through the filter. Gas standards containing siloxanes are not commercially available. The AlyTech GasMix™ for Liquids is used to vaporize octamethylcyclotetrasiloxane (D4) which is liquid at room temperature; this standard can then be mixed with a H₂S standard yielding a ready to use multiple compound gas standards.



Key Applications

- Calibration Laboratories
- Renewable Energy - Biogas
- Military - Air Treatment performance control (Regeneration analysis)
- Petrochemical, Oil & Gas
- VOC analysis
- Food & Flavor- Quality control
- Automotive Industry - Engine bench and Emission
- Specialty Gases
- Gas Chromatography
- Refinery Gas Analysis (RGA's)
- Gas Spectroscopy
- On-line Gas analyzer calibration



Technical specifications:

Dimensions:	L x W x H (cm): 42 x 25 x 33
Weight:	16 kg
Connectors:	1/8" Swagelok
Accuracy:	less than 2% of the flow all over the scale
Dilution:	from 0,5 to 100% of the initial concentration
USB communication:	Windows 7 recommended
Power Supply:	230 V / 2A / 50-60 Hz (115 V available)
Supply Pressure:	3 bar for gases – 3.2 bar liquid blanketing
Max Outlet Pressure:	atmospheric, higher pressure possible on request (contact us)

* Note Specifications subject to change without notice



ALYTECH
Centre Hoche – 3, rue Condorcet
91260 Juvisy sur Orge
FRANCE

T +33 (0)1 69 56 07 17
F +33 (0)1 69 44 49 81
W www.alytech.fr

