



Analytically Correct Engineered Systems

System Brief



Lean Gas Sample Systems

Models 520 | 530

Introduction

Analytically Correct Engineered Systems™ are tailored to the specific application and designed to ensure sample integrity is maintained throughout the sample extraction and preconditioning process. The Lean Gas Sample System is an ACES™ tailored to the Natural Gas Industry. Consisting of a heated and insulated enclosure mounted on a membrane tipped Genie® Probe Regulator™. It is best suited to sampling natural gas at conditions above the hydrocarbon dew point temperature or near the hydrocarbon dew point at pressures below the cricondetherm. A typical application is the sampling of transmission quality natural gas sampling at locations where ambient temperatures could cause condensation.

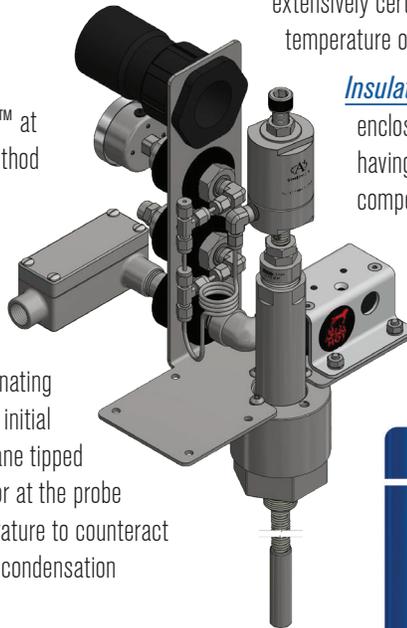
Genie® Membrane Technology™ on the tip of the Probe Regulator™ separates liquid at source conditions to ensure a representative gas sample and to protect the analyzer by excluding contaminants from the entire sample handling system. Genie® Membrane Probes™ are designed to be safely retracted from a pressurized source without any special tools, so the Genie® membrane can be easily accessed and maintained. The GP series utilizes a housing with a foot valve for process isolation. The Genie® Direct Drive™ series is inserted and retracted through a full port process isolation valve. The regulator seat in a Probe Regulator™ is near the probe tip to prevent condensation by using the gas stream flowing past the probe as a heat source to help compensate for the Joule-Thomson (JT) cooling effect and prevent condensation.

Rounding off our ACES™ systems is a removable probe mounted enclosure that is insulated and heated to prevent ambient temperature from adversely impacting the sample. The Lean Gas Sample System produces a low-pressure, liquid-free sample, that is representative of the source and ready for transport to the analyzer.

ACES Component Breakdown

Genie Probe Regulators™

Our revolutionary Genie® Membrane Probes™ featuring patented Genie® Membrane Technology™ at the probe's tip offers an Analytically Correct™ method for extracting a representative sample from a gas source near the dew point. In compliance with industry standards API 14.1, GPA 2166 and ISO 10715 entrained liquids are rejected inside of the line at the flowing pipeline temperature and pressure. By minimizing internal volume and eliminating dead volume, sample integrity is maintained from initial extraction until it leaves the probe outlet. Membrane tipped Probe Regulators™ are designed with the regulator at the probe tip, inside of the line using the flowing line temperature to counteract possible Joule-Thomson cooling that could cause condensation and distort the sample.



Model 530 shown >>

Enclosure Heater The self-limiting heater block is a small, simple, extensively certified device that provides a reliable heat source without temperature overload in small or densely populated enclosures.

Insulated Enclosure This case allows the sample pressure and enclosure temperature to be monitored at a quick glance, without having to remove the enclosure. For complete access to system components, one or both sides can be completely removed.

Power Requirement: 110 to 265 VAC, 80W or 24VDC, 25W

Electrical Connection Approval: ATEX/IECEX: II2G Ex db IIC T3
CSA: Class 1, Division 1, Group C&D, T3

Should you need assistance in selecting the appropriate components for your application, please consult the factory.

THE A+ SYSTEM OF COMPONENTS

- Genie® Probes Regulators™: Models GPR™ or 755™



The Sampling Experts™ | geniefilters.com