

Rosemount™ 370XA Gas Chromatograph

Low-Cost and Compact with Full Performance for Dedicated Applications



CHALLENGE

Traditional gas chromatographs (GC) with air-bath ovens use the same form-fit and apply a one-size-fits-all approach to address a wide range of applications. These analyzers are complex and expensive and have often been implemented and maintained by a smaller subset of process control professionals, many of whom are retiring, adding to the shortage of skilled workforce.

Plant operators are also encountering significant expenses for the operation and maintenance of traditional air-bath oven GCs, even for basic gas analysis applications. There is a need for an economical and compact GC that is not only easy to install, operate and maintain, but also capable of providing full performance for dedicated applications.

OUR SOLUTION

The Rosemount 370XA Gas Chromatograph is an economical solution for C6+ BTU/CV analysis applications and can also be customized to specific gas components and measurement ranges to address a wide range of dedicated applications.

Customizable and Robust: A simple and robust design featuring one Thermal Conductivity Detector (TCD) and three diaphragm valves means you don't have to sacrifice performance or pay for features you don't need.

The rugged TCD is able to measure well beyond the normal ranges seen in other designs and is sensitive to perform in many applications with low parts-per-million measurement requirements. This enables the Rosemount 370XA to be customized to tackle a range of dedicated, low-complexity gas analysis applications that demand a reliable, compact and economical gas chromatograph.

WHAT IF...

...You had a GC designed for dedicated, low-complexity gas analysis applications and less skilled operators, without sacrificing the accuracy or repeatability you need?

...You had a less expensive GC with a smaller footprint that uses less utilities than a traditional GC?



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HOW IT WORKS

The Rosemount 370XA uses Emerson's proprietary MON2020 software to allow complete control of the GC either locally or remotely. It is able to store 85 days of analysis results, over a year of final calibration results, and up to 2500 chromatograms. The analysis report provides heating value and relative density.

With its ability to communicate with your enterprise network, MON2020 is a powerful tool that ensures operators, maintenance personnel, and management have access to critical data. MON2020 can connect to the GC via Ethernet directly or over your local or wide area network.

Ease of Use: A full color Local Operator Interface (LOI) with built-in software assistance simplifies the operation and maintenance of the Rosemount 370XA by guiding even the untrained operator through common tasks, such as module replacement, changing calibration gas, and auto-valve timing.

Lower Total Cost of Ownership: The Rosemount 370XA doesn't require a shelter for most environments, operates on 24 VDC power, features an automatic validation routine that reduces calibration gas usage, and offers the option to use hydrogen carrier gas or air/nitrogen actuation gas instead of helium.

A unique *Maintainable Module™* enables inexperienced technicians to easily replace the analytical hardware as a single module in the field and with very low downtime.

Contact our application specialists to engineer the Rosemount 370XA to your specific gas components and measurement ranges.

Quick Facts

Standard C6+ Application	✓
Customized Applications	✓
AGA 8	✓
GPA 2172/2145	✓
ISO 6976	✓
CSA	✓
IECEX	✓
ATEX	✓
MON2020™ Software	✓
TCD	✓
Pole Mount (standard)	✓
Wall Mount (optional)	✓
Floor Mount (optional)	✓
24 VDC	✓
Streams	Up to 3 + Cal
Historical Results Storage	Up to 85 days
Chromatogram Storage	Up to 2500
Serial Ports	2
Ethernet Connections	2
Analog Output	2
Analog Input	1
Digital Output	1
Digital Input	1



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APPLICATIONS

The Rosemount 370XA's field-mountable design, small footprint, and low power usage requirements make it an ideal upgrade solution for energy measurement where older technology or lack of online energy determination may be contributing to inaccurate measurements.

Equipped with a thermal conductivity detector and three valves, the Rosemount 370XA Gas Chromatograph can be customized to accommodate measurement requirements in many applications.

The following table is an example of the most commonly measured gas components. Contact an Emerson representative for information on applications or gases that are not listed.

Typical Applications	Typical Sample Trains
Hydrogen (H₂) 0.1–100%	C ₃ / He / H ₂ / N ₂ / C ₁ / CO ₂ / C ₂ = / C ₂
Oxygen (O₂) 0.1–21%	C ₃ / N ₂ / C ₁ / CO ₂ / C ₂ = / C ₂
Carbon Monoxide (CO) 0.2–100%	C ₁ + / He / H ₂ / O ₂ / N ₂ / CO
Permanent Gases H ₂ / O ₂ / N ₂ / CO	C6+ / C ₃ / i-C ₄ / n-C ₄ / neoC ₅ / i-C ₅ / n-C ₅
Light Hydrocarbons Fast C3+ (under 90s) with N ₂ /O ₂ split - Landfill Gas	O ₂ / N ₂
Hydrocarbons (Gas Quality) C6+ Standard BTU Application (He Carrier) C6+ Standard BTU Application (H ₂ Carrier) C7+ Standard BTU Application	C7+ / C3 / i-C ₄ / n-C ₄ / neoC ₅ / i-C ₅ / n-C ₅ / C6's
Process Control and Optimization Demethanizer (tops & bottoms) Deethanizer (tops & bottoms) Depropanizer (tops & bottoms) Debutanizer (tops & bottoms) Debutamer (tops & bottoms) Depentanizer (tops only) C4 Parafins/Olefins Propane/Propylene split	O ₂
	C4+ / C3's / PD / MA
	H ₂
	He, H ₂ , O ₂ , N ₂ , C ₁ , CO, CO ₂
	C3+ / N ₂ / C ₁ / CO ₂ / C ₂ =
	C ₂ / C ₃ / i-C ₄ / n-C ₄ / i-C ₅ / n-C ₅

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INTEGRATED SOLUTIONS

Emerson offers fully integrated and pre-wired Rosemount 370XA Gas Chromatograph analyzer systems packaged in a single enclosure. The enclosure offers protection from extreme environmental conditions that can cause the gas in the sample system to fall below the hydrocarbon dew point, resulting in liquid fallout and inaccurate flow measurements.

The Rosemount 370XA integrated, modular solution can be:

- A small clamshell enclosure that replaces the need for a conventional single room or dual-room analyzer building, especially for lower volume applications.
- A simple indoor rack containing the required sample system and utility gas regulators.
- A heated enclosure for outdoor installation in cold climates.



Rosemount 370XA Clamshell Enclosure



Rosemount 370XA Modular Rack



Rosemount 370XA Modular Enclosure

Consider it Solved.

Emerson Automation Solutions supports you with innovative technologies and expertise to address your toughest challenges. For more information, visit [Emerson.com/RosemountGasAnalysis](https://www.emerson.com/RosemountGasAnalysis).

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