INFICON

Sensitive, Smart, and Easy-Going

Micro GC Fusion®

Gas Analyzer

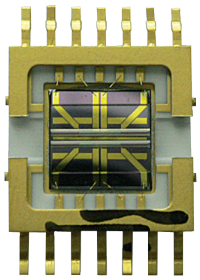
Micro GC Technology That is Sensitive, Smart, and Easy-Going

Micro GC Fusion offers advanced features in a compact, lightweight chassis that is easily transportable, allowing for accurate and rapid analysis where and when it is needed. Building on proven micro gas chromatograph (GC) technology, coupled with temperature programming, Micro GC Fusion covers extended (up to C12) gas analysis with excellent sensitivity and repeatability. The sensitive, smart, easy-going Micro GC Fusion is the perfect blend of ease-of-use harnessed with powerful analytical capabilities to meet the most challenging gas analysis needs.

FEATURES AT A GLANCE

- Rapid analysis, 1–3 minutes
- Fast temperature ramping extends analytical capability
- MEMS µTCD provides 10 times more sensitive analysis than a traditional TCD
- Integrated touch panel display provides intuitive instrument control and status display
- Intelligent web-based GUI and Wi-Fi allows operation from any web-enabled computing device
- Modular design enables easy application adaptation, system maintenance and OEM integration
- Optional integrated sample conditioner maintains sample temperature at 100°C, and reduces input pressure from up to 1000 psi

SENSITIVE DETECTION



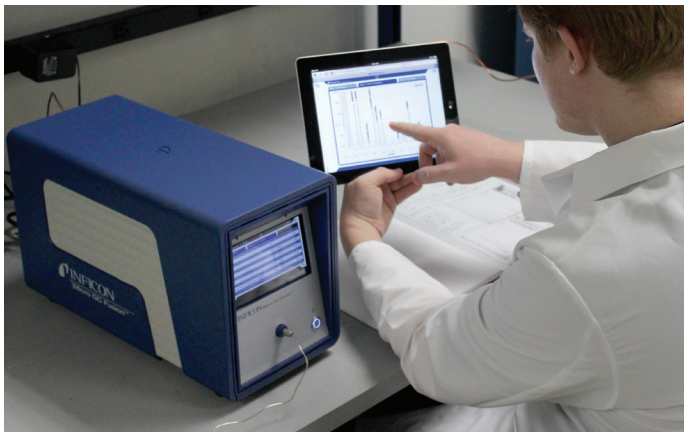
MEMS µTCD capable of measuring down to 1 ppm (shown larger than actual size)

Micro GC Fusion is equipped with a Microelectromechanical systems (MEMS) micro Thermal Conductivity Detector (µTCD) that offers a 1 ppm detection limit, which is at least 10 times more sensitive than a traditional TCD. The temperature programmable GC column focuses the late eluting peaks, providing advanced control over peak resolution and significant sensitivity gain for heavier hydrocarbons.

SMART ENGINEERING

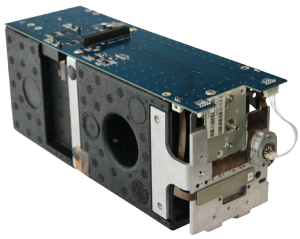
Integrated touch panel display provides intuitive instrument control and status display

Micro GC Fusion offers a touch panel display and Wi-Fi network protocol. An analysis can be run directly from the front panel or from an external wirelessly connected computing device. The web-based chromatographic software is operating system independent and license free. The software interface can dynamically adapt to any display dimension, allowing the user to operate the instrument with ease from a tablet or computer.



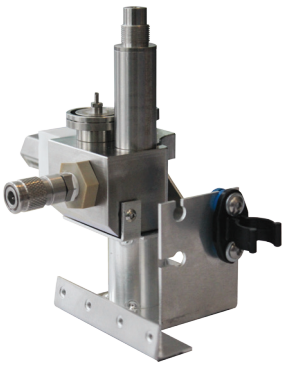
Web-based chromatographic software can be operated from the front panel, a tablet or computer

EASY OPERATION



Plug and play GC module with temperature programming capability

Micro GC Fusion is based on a modular GC design, and the chassis can house up to two GC modules. Each module is comprised of an injector, a temperature programmable column and a detector. A user can easily exchange a GC module on-site in minutes to quickly adapt to new applications or conduct instrument maintenance. This modular design also simplifies OEM integration.



Integrated sample conditioner maintains sample temperature at 100°C, and reduces input pressure from up to 1000 psi

Through the front or rear sample inlet on Micro GC Fusion, gas samples can be easily introduced using a gas syringe, sample bag, pressurized cylinder or from a pipeline. An optional integrated sample conditioner may be factory configured to allow the operator to accurately analyze sample gas streams at input pressures up to 1000 psi. This device heats and maintains the sample at 100°C to minimize the ambient effect on an analysis.

EXCEPTIONAL SAMPLE THROUGHPUT

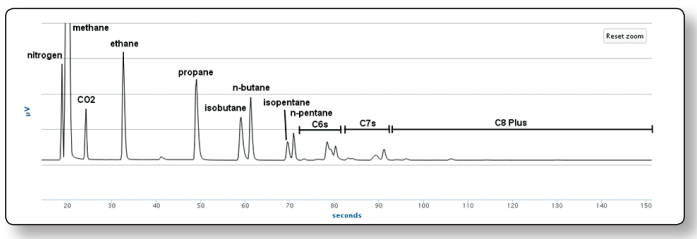
A typical Micro GC Fusion analysis is between 1 to 3 minutes. With its modular architecture, Fusion allows a sample to be analyzed in parallel by multiple GC modules, with each module optimized to measure at maximum speed. This rapid analysis results in a significant reduction in analysis cycle time. Speed, transportability, sensitivity and ease of operation allow Fusion to meet and exceed industry requirements and user expectations.

APPLICATIONS

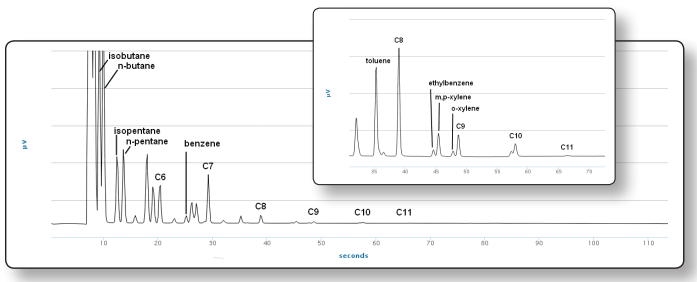
Micro GC Fusion offers intuitive interfaces and scalable design that enables fast and accurate gas composition analysis. It is ideal for on-site, transportable and laboratory applications, including:

- Natural gas and extended natural gas
- Natural gas odorant
- Refinery gas
- Fixed gas
- Liquefied petroleum gas (LPG)
- Syngas, fuel cell, landfill gas and biogas for alternative energy
- Impurities in petrochemical products and specialty gases
- Flue gas/stack emissions monitoring
- Mud logging
- Mine gas
- Dissolved gas analysis (DGA)

RESULTS IN SECONDS



Natural gas analysis on a PLOT-Q module (up to C7 in 92 seconds)



Extended natural gas analysis on a PDMS module (up to C11 in 68 seconds)

SPECIFICATIONS

Dimensions/Weight	
Maximum Weight	6.8 kg (13 lbs.)
Dimensions (L x W x H)	43.3 x 20 x 26.5 cm (17 x 7.9 x 10.4 in.)
Injectors	
Types	Variable Volume, Variable Large Volume, Backflush, Fixed Volume
Carrier Gas	External Cylinder Helium, hydrogen, nitrogen, argon
GC Columns	Wall Coated Open Tubular (WCOT) Capillary Porous Layer Open Tubular (PLOT)
Programmable Column Temperature	
Initial	15°C above ambient, 35°C or above
Maximum	300°C or column phase maximum, whichever is lower
Resolution	0.1°C
Heating Rate	5°C per second maximum
Thermal Conductivity Detector	
Linear Dynamic Range	10^6 ±10%
Detection Limit	1 ppm, n-Hexane (WCOT columns)
Internal Volume	240 nL (MEMS)
Repeatability	
Retention Time	≤0.1% RSD
Peak Area	≤0.5% RSD (compounds at ≥0.1% concentration, WCOT columns)
Environmental Conditions	
Operating Temperature	0°C to 50°C ambient
Relative Humidity	5 to 95% (non-condensing)
Control Software	Web-based compatible with common web browsers
Communication	
Wired Ethernet	RJ-45 connection
Wireless Ethernet	IEEE 802.11a/g/n
Power Supply	
Power Supply Input	100 to 240 V (ac), 50 to 60 Hz, 5A
Power Supply Output	24 V (dc), 10.83A, 260 Watts

INFICON Bring the Lab to the Sample™

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