



## MOBILE GC-MS

# FLIR GRIFFIN™ G410



The FLIR Griffin G400-Series GC-MS (Gas Chromatograph Mass Spectrometer) systems provide chemical identification and are built to operate in mobile labs, reconnaissance vehicles, deployable lab containers, and other portable platforms. They are equipped with a rugged, internal shock isolation system that is tested to rigorous MIL-STD-810G standards. Hassle-free, interchangeable sampling tools differentiate each GC-MS model. The Griffin G410, like the other G400-series products, contains the same standard injection port commonly found on laboratory-based GC-MS systems. It accepts revolutionary sample introduction tools like the PSI-Probe™, without sacrificing the ability to perform more traditional techniques like syringe, SPME fiber, headspace, and autosampler injections. Griffin GC-MS systems accurately detect and identify explosives, drugs, CWAs, TICs, environmental pollutants, and other chemicals. The simplified user interface gives field operators and scientists quick and accurate answers. The Griffin G400-series products preserve sample integrity, eliminate the expense of shipping unwanted samples, and lead to real-time, actionable countermeasures that protect public safety.

[www.flir.com/G410](http://www.flir.com/G410)



### INTEGRATED SYRINGE INJECTOR

Mission-specific sampling via same split/splitless injector found on typical lab-based GC-MS systems

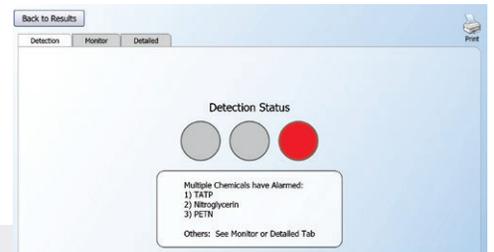
- Offers versatile, quick-connect sampling tools for introducing liquid, solid, and vapor samples
- Accepts native liquid & solid samples via SPME and PSI-Probe™ sampling tools; no sample prep is required, expediting field-analysis
- Accepts prepared organic liquid samples via traditional direct syringe and autosampler injection techniques
- Vapor headspace samples can also be introduced via manual headspace
- Low cost-per-sample



### BUILT FOR MOBILE PLATFORMS

Rugged, compact design minimizes footprint on mobile platforms

- Built-in pump and shock isolation system allows GC-MS to operate in a moving vehicle
- Multiple power and carrier gas options based on the mission
- Optional vehicle mount kit simplifies installation for on-the-go missions



### SIMPLE, ACCURATE CHEMICAL IDENTIFICATION

Intuitive graphical user interface expedites decision-making for field operators and scientists

- Easy-to-use wizard tool expands operator base with guided operation
- Simple color-coded, go/no-go alarms eliminate data interpretation
- Access to detailed chromatographic and mass spectral data
- Ability to create mission-specific methods and libraries
- Gold-standard identification with MS/MS confirmation

## SPECIFICATIONS

### Griffin G410

Technology	GC/MS; fully integrated low thermal mass gas chromatograph (LTM-GC) and MS/MS-capable ion trap mass analyzer
Mass Range / Scan Rate	35-425 m/z; up to 10,000 m/z per second @ 20 points per m/z
Ionization Type	Internal electron ionization (EI)
Detector	Conversion dynode electron multiplier
LTM-GC Column	Standard VB-35MS (15M x .25mm x .25µm); others available; programmable 40 to 300 °C
Calibrant	Onboard FC-43 (Perfluorotributylamine)
Carrier Gas	Connection for external gas source (choice of He or H <sub>2</sub> ); gas available from many vendors; H <sub>2</sub> generator available

### Sampling & Analysis

Sample Introduction	Split/splitless injector accepts: <ul style="list-style-type: none"> <li>- Direct syringe injection (1 syringe included)</li> <li>- SPME fiber (optional)</li> <li>- Manual headspace sampler (optional)</li> <li>- Autosampler (optional)</li> <li>- PSI-Probe™ thermal separation via TAG™ (optional)</li> <li>- PSI-Probe thermal separation via GERSTEL-Twister® (optional)</li> </ul>
Sample Phase	Solid and liquid
Threats	Detects and identifies explosives, narcotics, CWAs, TICs, environmental pollutants, and other chemicals
Sampling & Analysis	Full identification in 5-15 minutes for most chemicals

### System Interface

Display & Alerts	Full automation by connection with computer
Communication	Ethernet connection TCP/IP; remote operation and diagnostics
Data Storage	Data automatically stored on supplied laptop (500 gb)
Simplified User Interface	Griffin System Software (GSS); GriffinLib, NIST and AMDIS mass spectral libraries included; capable of user-defined library
Training Requirements	1-2 days depending on level of training desired; Operator, Developer, and Full System certifications available

### Power

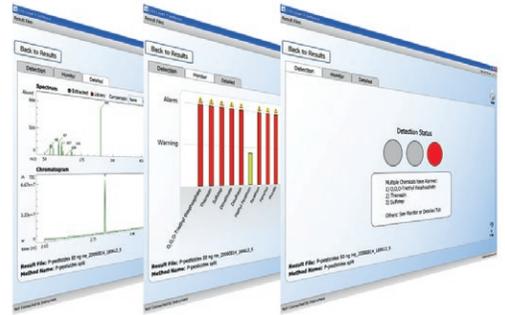
Input Voltage	100–240 VAC; 24 VDC (+/- 5%, 25 A, 600 W)
Cold Start Time	<30 mins (includes automatic tuning/calibration)

### Environmental

Operating Temp / Humidity	41 to 104 °F (5 to 40 °C); <85% relative humidity
Storage Temp	-13 to 131 °F (-25 to 55 °C)

### Physical Features

Dimensions (L x W x H)	19.7 x 20.3 x 17.8 in (50.0 x 51.6 x 45.2 cm)
Weight	80.5 lbs (36.5 kg)
Enclosure & Protection	Rugged, internal shock mounting system; integrated vacuum system contains mini turbomolecular pump and quad diaphragm; no external shock table or vacuum system required



Specifications are subject to change without notice. For the most up-to-date specs, go to [www.flir.com](http://www.flir.com)

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