



## MOBILE GC-MS WITH AIR SAMPLING

# FLIR GRIFFIN™ G460



The FLIR Griffin G460 GC-MS (Gas Chromatograph Mass Spectrometer) provides chemical identification and is built to operate in mobile labs, reconnaissance vehicles, deployable lab containers, and other portable platforms. It is equipped with a rugged, internal shock isolation system that is tested to rigorous MIL-STD-810G standards. The Griffin G460 contains the same standard injection port commonly found on lab-based GC-MS systems and accepts sample injections via PSI-Probe™, syringe, SPME fiber, headspace, and autosampler. It also includes an additional integrated universal sampling port, providing direct air sampling capability, while also accepting plug-and-play samplers like the Griffin X-Sorber and Purge and Trap. The Griffin G460 accurately detects and identifies explosives, drugs, CWAs, TICs, environmental pollutants, and other chemicals. The simplified user interface gives field-operators and scientists quick and accurate answers. The Griffin G460 helps preserve sample integrity, eliminate the expense of shipping unwanted samples, and lead to real-time, actionable countermeasures that protect public safety.

[www.flir.com/G460](http://www.flir.com/G460)



### MISSION-SPECIFIC SAMPLING

Two integrated sampling ports provide flexible options for introducing liquid, solid, and vapor samples

- Same split/splitless injector found on typical lab-based GC-MS systems accepts PSI-Probe™, direct syringe, autosampler, SPME, and headspace injections
- Built-in air sampling module provides 24/7 continuous air monitoring capability while providing a docking station for portable plug-and-play water and vapor samplers
- Versatile, quick-connect sampling tools extend the mission to remote locations and eliminate sample prep at the site of action
- Low cost-per-sample



### VEHICLE-MOUNTABLE PLATFORM

Rugged design provides lab-quality, on-site chemical identification for real-time intelligence

- MIL-STD-810G compliant for shock, vibration, temperature, and humidity
- Compact design includes integrated pump and shock mount system that minimize footprint on mobile platform
- Optional vehicle mounting kit simplifies installation for operation in a moving vehicle
- Multiple power and carrier gas options based on the mission
- Lab-quality chemical identification provides real-time information at the site of action



### INTUITIVE USER CONTROLS AND RESULTS

Easy-to-use graphical user interface expedites decision-making for field operators and scientists

- Easy-to-use wizard tool helps expand operator base by expertly guiding user in selecting the most appropriate predetermined method and library for rapid sample identification
- Results are presented in a simple color-coded, go/no-go alarm format that eliminate data interpretation in the field
- Expert users have access to detailed chromatographic and mass spectral data, as well as the ability to create mission-specific methods and libraries
- Pre-loaded methods and mission-specific libraries produce chemical identification in five to fifteen minutes for most targets of interest

## SPECIFICATIONS

### Griffin G460

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-5MS (15M x .18mm x .18µm); others available; programmable 40 to 300 °C
Calibrant	On-board 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	<p>Split/splitless injector accepts:</p> <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> <p>Universal Sampling Port with standard Tenax TA and Carboxen 1017 dual bed preconcentration tubes accepts:</p> <ul style="list-style-type: none"> <li>- Direct air intake onto precon tubes (adaptor included)</li> <li>- Griffin Purge and Trap for water analysis (optional)</li> <li>- Griffin X-Sorber handheld vapor sampler (optional)</li> </ul>
Sample Phase	Solid, liquid, and vapor
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

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

### Power

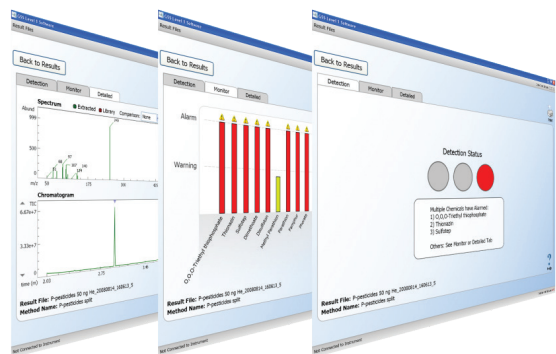
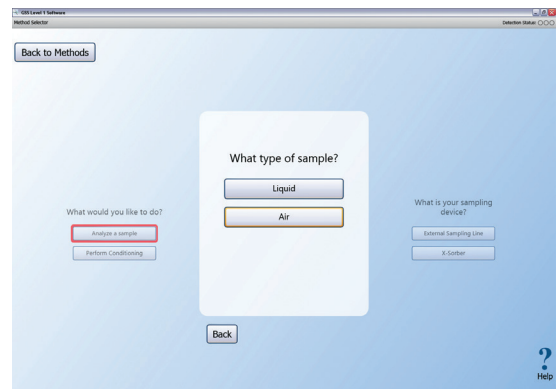
Input Voltage	100–240 VAC; 24 VDC (+/- 5%, 25 A, 600 W)
Cold Start Time	<30 mins (includes automatic tuning/calibration)

### 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)	19.2 x 19.2 x 21.1 in (48.8 x 48.8 x 53.6 cm)
Weight	98 lbs (44.5 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



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20-0749-DET-DET-DATASHEET-REV-G460 LTR



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