



MOBILE GC-MS WITH REAL-TIME AIR MONITORING FLIR GRIFFIN™ G465

The FLIR Griffin G465 is the most flexible mobile GC-MS (Gas Chromatograph/Mass Spectrometer) system available for mobile and forward deployed labs, reconnaissance vehicles, 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 G465 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 addition of a heated sampling line enables survey mode for near real-time vapor threat identification. The Griffin G465 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 G465 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/G465



SURVEY MODE FOR RAPID VAPOR THREAT ID

Vehicle-ready GC/MS platform for mission-critical rapid chemical identification

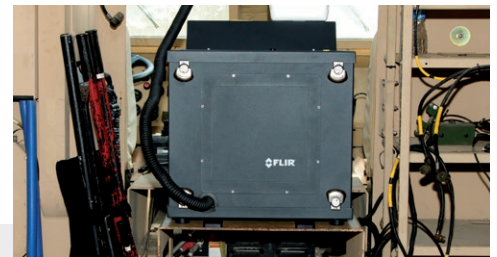
- Membrane-based, near real-time vapor threat detection with integrated heated sampling line
- Internal active vacuum pumping maximizes system uptime and expands range of sampling options
- Integrated shock isolation system minimizes footprint on a vehicle
- MIL-STD-810G compliant for shock, vibration, temperature, and humidity
- Optional vehicle mounting kit simplifies installation for operation in a moving vehicle



MULTI-MISSION SAMPLING

Integrated inlets and interchangeable sampling tools provide in-field flexibility and long-term value

- Flexible sampling options accommodate solid, liquid, and vapor samples
- Same split/splitless injector found on typical lab-based GC-MS systems and 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



CONFIDENT, ACTIONABLE CHEMICAL IDENTIFICATION

Industry-leading chemical searching techniques present a single identification result

- Easy-to-use wizard tool guides user through method selection
- Go/no-go alarms eliminate data interpretation
- Chemical ID in five to fifteen minutes
- Access to detailed chromatograph and mass spectral data
- Ability to create mission-specific methods and chemical libraries
- Operator training completed in one day

SPECIFICATIONS

Griffin G465

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 ₂); gas available from many vendors; H ₂ generator available

Sampling & Analysis

Sample Introduction	<p>Split/splitless injector accepts:</p> <ul style="list-style-type: none"> - Direct syringe injection (1 syringe included) - SPME fiber (optional) - Manual headspace sampler (optional) - Autosampler (optional) - PSI-Probe™ thermal separation via TAG™ (optional) - PSI-Probe thermal separation via GERSTEL-Twister® (optional) <p>Universal Sampling Port with standard Tenax TA and Carboxen 1017 dual bed preconcentration tubes accepts:</p> <ul style="list-style-type: none"> - Direct air intake onto precon tubes (adaptor included) - Griffin Purge and Trap for water analysis (optional) - Griffin X-Sorber handheld vapor sampler (optional) <p>Membrane Introduction Mass Spectrometry (MIMS) Inlet:</p> <ul style="list-style-type: none"> - Direct air intake for near real-time air monitoring capability
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; near real-time in survey mode

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

Power

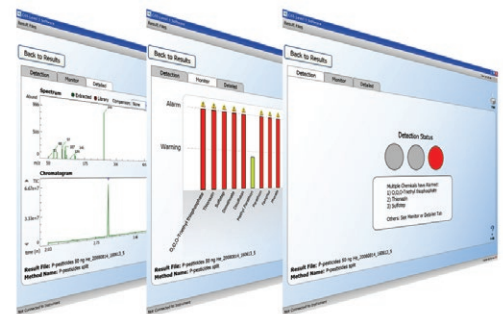
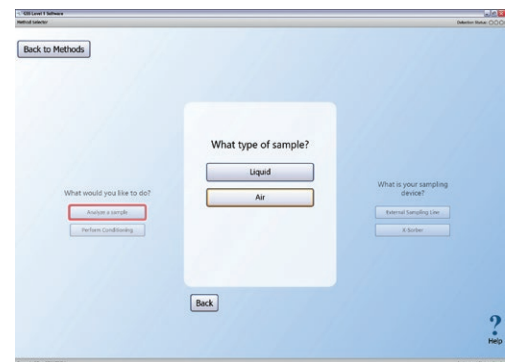
Input Voltage	100–240 VAC; 24 VDC (+/- 5%, 25 A, 1000 W)
Cold Start Time	<30 mins (includes automatic tuning/calibration)

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	99.5 lbs (45.0 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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