



## MOBILE GC/MS WITH REAL-TIME VAPOR SURVEY MODE

# FLIR GRIFFIN™ G465

The FLIR Griffin G465 is the most flexible transportable GC/MS (Gas Chromatograph/Mass Spectrometer) system available for mobile and forward-deployed labs, reconnaissance vehicles, and other portable platforms. Like the Griffin G460, the G465 features an integrated split/splitless injector and universal sampling port. The addition of a heated sampling line enables survey mode for near real-time vapor threat identification. Industry-leading chemical matching techniques provide high-confidence results in complex environments and eliminate data interpretation in the field. Intuitive user controls, on-screen guidance, and simple data presentation expedite decision making for field operators. The Griffin G465 provides the ease of use and intelligence needed to perform real-time countermeasures that protect public safety.

[www.flir.com/G465](http://www.flir.com/G465)



### Survey mode capability for rapid vapor threat ID

No compromises-mission-critical rapid chemical ID adds to complete, vehicle ready GC/MS platform

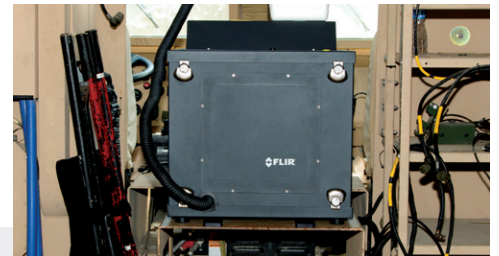
- Membrane-based, near real-time vapor threat detection capability with integrated heated sampling line
- Integrated active vacuum pumping system maximizes system uptime and expands range of sampling options
- Integrated shock isolation system minimizes footprint
- Reliable Performance no matter where the mission takes you
- Lighten your load with handheld plug-and play samplers made for downrange missions



### Integrated, multi-mission sampling

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

- Flexible sampling options adapt as your mission changes
- Two integrated sampling ports and multiple quick-connect sampling tools for solid, liquid and vapor samples
- Built-in air sampling module provides 24/7 continuous air monitoring capability and docking station for portable plug-and-play water and vapor samplers
- Split/Splitless injector accepts PSI-Probe (TAG and Twister), direct syringe, autosampler, SPME, and headspace injections



### Single-answer, actionable chemical identification

Industry-leading chemical searching techniques present a single identification result

- Easy-to-use wizard tool makes method selection a snap
- Go/No-Go alarms eliminate data interpretation
- Chemical ID in 5-15 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 .18um); others available; programmable 40 to 300 °C
Calibrant	Onboard FC-43 (Perfluorotributylamine)
Carrier Gas	Connection for external gas source (choice of He or H2); gas available from many vendors; H2 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> <p>Membrane Introduction Mass Spectrometry (MIMS) Inlet:</p> <ul style="list-style-type: none"> <li>- Direct air intake for near real-time air monitoring capability</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, 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](http://www.flir.com)

### Power

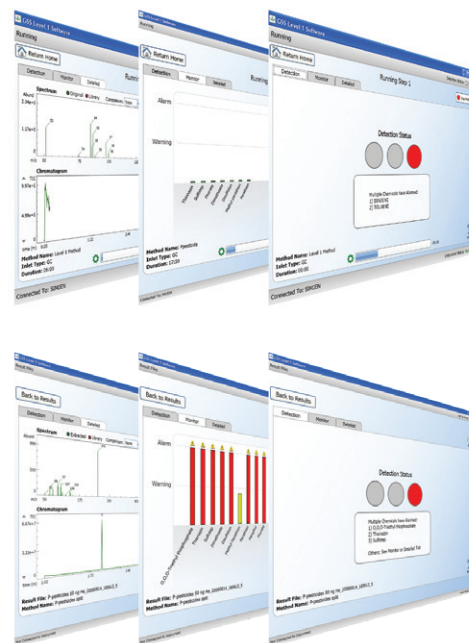
Input Voltage	100–240 VAC; 24 VDC (+/- 5%, 25 A, 1000 W)
Cold Start Time	<30 mins (includes automatic tuning/calibration)

### 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



**CORPORATE HEADQUARTERS**  
FLIR Systems, Inc.  
27700 SW Parkway Ave.  
Wilsonville, OR 97070  
PH: +1 877.773.3547

**NASHUA**  
FLIR Systems, Inc.  
9 Townsend West  
Nashua, NH 03063  
USA  
PH: +1 866.477.3687

**LATIN AMERICA**  
FLIR Systems Brasil  
Av. Antonio Bardella, 320  
Sorocaba, SP 18085-852  
Brasil  
PH: +55 15 3238 7080

**CANADA**  
FLIR Systems, Ltd.  
920 Sheldon Court  
Burlington, ON L7L 5K6  
Canada  
PH: +1 800.613.0507

[www.flir.com](http://www.flir.com)  
NASDAQ: FLIR

Equipment described herein is subject to US export regulations and may require a license prior to export. Diversion contrary to US law is prohibited. Imagery for illustration purposes only. Specifications are subject to change without notice. ©2018 FLIR Systems, Inc. All rights reserved. 03/19/18

18-0581-DET-DET-G465



The World's Sixth Sense®