



## GRIFFIN G510 FLIR

PERSON-PORTABLE GC-MS CHEMICAL IDENTIFIER

- ANALYZE SOLIDS, LIQUIDS, AND VAPORS
- LAB-QUALITY, MISSION-READY GC-MS
- TOUCHSCREEN OPERATION WHILE IN PPE

### MASS SPEC PERFORMANCE REDEFINED

Confidently identify unknowns and take action with guided controls and simple threat alarms

- Lab, gold-standard linear quadrupole mass analyzer
- Full NIST and SWGDRUG chemical library for field identification and analysis of unknown materials and mixtures
- Simple on-board touchscreen with automated user controls and Method Selector tool
- Visual and audible alarm confirmation with limited data interpretation
- On-board WiFi and GPS assist in maintaining result defensibility

### ULTIMATE CHEMICAL DETECTION TOOLBOX

Versatile in-field sampling options for vapor, liquid, and solid samples

- Vapor sampling probe with rapid-response survey mode
- Integrated split/splitless liquid injector accepts direct injection of organic liquids
- Available Prepress Sample Introduction (PSI) Probe with Touch-And-Go (TAG) capability for direct analysis of solid samples
- Effortlessly links with SPME and headspace sample collection tools
- High-fidelity, low thermal mass (LTM) GC column for unsurpassed resolution in challenging environments



THE **GRIFFIN G510** GAS CHROMATOGRAPH MASS SPECTROMETER (GC/MS) IS A VERSATILE, PERSON PORTABLE CHEMICAL IDENTIFIER. IT COMPLEMENTS PRESUMPTIVE TECHNIQUES USED DURING EMERGENCY MISSIONS, BY ENABLING RESPONDERS TO ANALYZE ALL PHASES OF MATTER (LIQUID, SOLID, VAPOR) AND BY PERFORMING RAPID FIELD-CONFIRMATION OF CHEMICAL HAZARDS.

The integrated heated sample probe enables hot zone operators to identify vapor-phase chemical threats within seconds when operated in Survey Mode. The integrated split/splitless injector allows for environmental, forensic, and hazardous material sampling via syringe injection of organic liquids.

The 9" on-board touchscreen delivers automated user controls and can be operated while wearing full personal protective equipment downrange. It is built with an IP65-rated enclosure for harsh environments and supports passive defense, interdiction, elimination, and consequence management missions. Long-lasting, on-board batteries ensure every mission is supported from beginning to end.



# Griffin G510

## FLIR



### GRIFFIN G510

Technology	Gas Chromatography/Mass Spectrometry (GC/MS)
Dimensions (L x W x H)	13.25 x 13.25 x 15.75 in (33.7 x 33.7 x 40 cm) - includes batteries, carrier gas, and vacuum system
Weight	36 lbs (16.3 kg) - includes batteries, carrier gas, and vacuum system
Operating Temp / Humidity	32 to 104 °F (0 to 40 °C); <95% relative humidity
Storage Temp	-13 to 131 °F (-25 to 55 °C)
Decontamination	Sealed for Survey Mode operation in hot-zone; IP65-rated enclosure is dust-tight and spray-resistant
Power Supply	100-240V 50-60Hz (220 W max); 19V (DC); 2 x #2590 @ 15V Li Ion batteries (included)
Battery Life	4 hrs in Survey Mode, 2 hrs in Confirmation Mode; hot swappable
Start Up Time	15 minutes to full operation from cold
Calibrant	On-board FC-43 (Perfluorotributylamine)
Carrier Gas	On-board helium; external helium connector, automatic switching (Hydrogen capable)

### SYSTEM INTERFACE

Display	9" Multitouch Color Display (1280x720 WVGA;1300 nits brightness)
Alerts	Audible and visual (touchscreen and handheld probe)
Software	GSS Level 1 Touch; multiple user levels
Communication	2 x USB 2.0, Bluetooth 4.0, WiFi 802.11n, Ethernet via USB, integrated GPS
Data Storage	Internal 256GB SSD
Training Requirements	2 hours basic operation; 8 hours Operator Certification

### SAMPLING & IDENTIFICATION

Sample Phase	Solid, liquid, and vapor
Sample Introduction	<p><b>Heated Sample Probe (included standard):</b></p> <ul style="list-style-type: none"> <li>- Vapor survey mode via Membrane Introduction Mass Spectrometry (MIMS) Inlet</li> <li>- Vapor confirmation via Internal Dual-Bed Preconcentrator</li> </ul> <p><b>Split/splitless injector (included standard) accepts:</b></p> <ul style="list-style-type: none"> <li>- Direct liquid sampling (organic solution) via syringe</li> <li>- Liquid extraction via SPME fiber or PSI-Probe w/ Gerstel Twister *</li> <li>- Solid PSI-Probe thermal separation via TAG *</li> </ul>
Threats	Detects and identifies explosives, narcotics, CWAs, TICs, environmental pollutants, and other chemicals
Standard Reference Database	NIST/EPA/NIH Mass Spectral Library, SWGDRUG Mass Spectral Library, and GriffinLib Mass Spectral Library included
Sampling & Analysis	Full identification in 4-15 minutes for most chemicals; identification within seconds (near real-time) when operating in Survey Mode

### MASS SPECTROMETER

- Mass Analyzer Type : Linear quadrupole mass filter
- Mass Range / Resolution 15-515 m/z; 0.7 amu @ FWHM
- Ionization Type / Source : Electron Impact Ionization; non-radioactive ionization source
- Detector Electron Multiplier
- Vacuum System : Self-contained miniature turbomolecular & diaphragm pumps
- Dynamic Range : 7 decades
- Detection Limit : PPM (parts per million) - PPT (parts per trillion)

### GAS CHROMATOGRAPH

- LTM-GC Column : DB-5MS (15 m x .18 mm x 0.25 µm); others available
- Temperature Range : Programmable 40 to 300 °C; ramping of 100 °C/min

### HTDS

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