

GRIFFIN 460

Lab quality, Mobile GC/MS



OVERVIEW

The FLIR Griffin 400-series GC/MS (Gas Chromatograph / Mass Spectrometer) products provide lab-quality chemical identification in a field-ready package. Each Griffin GC/MS model is equipped with a rugged, internal shock isolation system that is tested to rigorous MIL-STD-810G standards. They are built to operate in mobile labs, reconnaissance vehicles, deployable lab containers, and other portable platforms. Hassle-free, interchangeable sampling tools differentiate each GC/MS model. Every Griffin 400-series GC/MS contains an industry standard injector port. The Griffin 460 model 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. 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 400-series products preserve sample integrity, eliminate the expense of shipping unwanted samples, and lead to real-time, actionable countermeasures that protect public safety.



APPLICATIONS

Environmental monitoring and emergency response

Forensic investigation

Industrial process monitoring

Continuous building air monitoring

BENEFITS

- Quick and simple to use, from field operator to scientist
- Extremely low cost-per-sample
- Continuous air monitoring
- Pre-loaded test methods with wizard for fast field operation
- Accurate, comprehensive GriffinLib™ chemical library
- Gold-standard identification with MS/MS confirmation



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SPECIFICATIONS

TECHNOLOGY

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); available from many vendors; H2 generator available

SAMPLING & ANALYSIS

Sample Introduction	Split/splitless injector accepts:- 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)Universal Sampling Port with standard Tenax TA and Carboxen 1017 dual bed preconcentration tubes accepts:- Direct air intake onto precon tubes (adaptor included)- Griffin Purge and Trap for water analysis (optional)- Griffin X-Sorber handheld vapor sampler (optional)"
Sample Phase	Solid, liquid, and vapor
Threats	Detects and identifies explosives, narcotics, CWAs, TICs, environmental pollutants, and other chemicals
Sampling & Analysis	Full identification in 4-15 mins 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)	19.2 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 & quad diaphragm; no external shock table or vacuum system required

