



# FLIR GRIFFIN™ G500 SERIES

Accessories and Consumables

- Environmental Contaminant Analysis
- Forensic/Arson Investigation
- Emergency Response
- Building Air Monitoring
- Law Enforcement
- Sensitive Site Exploitation



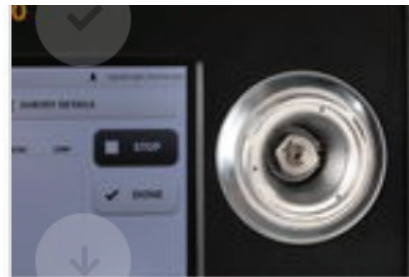


# GRIFFIN GC/MS

## Easy Matters

### Lab quality, mobile GC/MS that anyone can use

The FLIR Griffin G500-series GC/MS (Gas Chromatograph / Mass Spectrometer) products provide lab-quality chemical identification in a field-ready package that anyone can use. Hassle-free, interchangeable sampling tools differentiate each GC/MS model and are available for air, liquid, and solid samples. The Griffin G500 model, contains an integrated split/splitless injector port. It is the same injector found on standard laboratory-based GC/MS systems and accepts revolutionary sample introduction tools like the PSI-Probe™, without sacrificing the ability to perform more traditional techniques. Within 15 minutes, the systems accurately detect and identify explosives, drugs, CWAs, TICs, environmental pollutants, and other chemicals.



**SPLIT/SPLITLESS INJECTOR PORT**

## SPLIT/SPLITLESS INJECTOR PORT

Every Griffin G500-series model contains an integrated split/splitless injector port. It is the same injector found on standard laboratory-based GC/MS systems. It accepts revolutionary sampling tools like the PSI-Probe, without sacrificing the ability to perform more traditional sample introduction techniques commonly found in a lab. Standard test methods are provided with the system, but can be customized to fit the required application.

## STANDARD CONSUMABLES



## HELIUM

Available in two purity levels and two sizes to cover a wide range of needs



**13 Liter Helium Carrier Gas Cartridge** | 99.5% or 99.995% purity

Each 13 Liter cartridge with either the purity of 99.5% or 99.995% provides economical solution for applications primarily focused on survey mode or air confirm and injections for volatile chemicals and agents as well as sampling of semi-volatile targets including drugs and explosives.

**431-021-0006**



**105 Liter Helium Carrier Gas Cylinder and regulator** | 99.999% purity

Each 105 Liter cartridge provides a larger capacity and longer run times without the need of switching cartridges when the instrument is stationary.

**431-021-0011**

## MOUNTING KIT

The Vehicle Mount Kit (VMK) is available in two variants:



**Griffin G500 Series Standard Vehicle Mount Kit.** Rigid base version for on-road vehicles.

**103-032-0100**

**Griffin G500 Series Ruggedized Vehicle Mount Kit.** Rugged version with wire-rope isolators for rough and off-road vehicle use.

**103-032-0101**





# FLEXIBLE SAMPLING TECHNOLOGIES

## Multi-Modal Sample Collection and Analysis

### Traditional and modern tools for the field-user

We equip our instruments with application-specific sampling technologies to address specific customer needs. FLIR is the leader in field-based sampling, offering the largest selection of sampling tools. Our modern plug-and-play samplers are lightweight, simplify in-field sampling, and eliminate the need for time-consuming sample preparation steps, thus expediting the sample identification process. These samplers are interchangeable and can be easily swapped. The plug-and-play samplers do not interfere with the ability to use more traditional sampling techniques via the integrated injector port. Our in-field solution features flexible sampling options that provide lab-quality chemical identification in a simple to use package.



### SAMPLE PREP KIT [SPK]

- Solid/Liquid Extraction
- Dilute and Shoot Methodology
- Minimal Training Required for use

**241-005-0110**

### SPK REFILL KIT

- To refill the SPK
- Up to 100 samples

**241-005-0111**



### PSI-PROBE

- No sample prep required
- Collect solid, liquid, and ultra-trace residues in native form
- Twister technology up to 1000x more sensitive than SPME

**606-001-0010**



### SYRINGE

- Precise quantitative determinations
- Lab-standard technique
- Available from many vendors
- Benchtop performance for mobile applications

**100-001-0016**



### SPME FIBER

- No sample prep required
- Direct liquid or vapor headspace sample collection
- Fast and simple
- Available from many vendors

**241-005-0076**



### AUTOSAMPLER

- Automated and precise liquid injection
- Rapid sample processing
- Up to 120 sample vials
- Integration kit for Griffin GC/MS

**100-000-0012**



### HEADSPACE SAMPLER

- Liquid samples
- Small footprint

**100-000-0018**





## SYRINGE

For applications that require precise quantitative determinations, classic sample preparation and dilution techniques may be employed. Utilizing a syringe, prepared liquid samples can be extracted and injected to the Griffin GC/MS for identification and quantitation. Each Griffin GC/MS starter kit contains one syringe. Additional syringes can be purchased from a number of commercial vendors.

### SPECIFICATIONS

<b>Use Profile</b>	Compatible with all Griffin GC/MS models; used for SSE, forensic and environmental analysis, incident response, and events
<b>Size / Weight</b>	N/A
<b>Collection Phase</b>	Solid or liquid mixed in organic solvent
<b>Power</b>	N/A
<b>Sampling</b>	Standard test methods provided or additional methods can be developed using Griffin System Software
<b>Operation</b>	5-40 °C



## SPME FIBER

Solid-phase microextraction (SPME) is a prep-less sampling technique that allows for the extraction of volatile and non-volatile organic chemicals from samples via a specially coated fiber. The SPME fiber is placed directly into a water sample or exposed to air to collect samples. After sampling extraction is complete, the SPME fiber is placed into the injector on the Griffin GC/MS. No solvents, dilutions, or wet chemistry are needed when using SPME. The technique is fast and simple, offering a unique sampling option for on-site applications. SPME holders and fibers can be purchased from a number of commercial vendors.

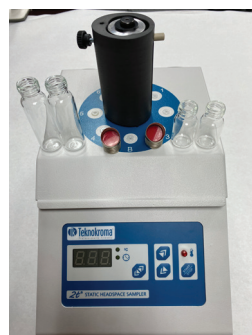
<b>Use Profile</b>	Compatible with all Griffin GC/MS models; used for environmental analysis and incident response
<b>Size / Weight</b>	N/A
<b>Collection Phase</b>	Direct liquid or vapor headspace
<b>Power</b>	N/A
<b>Sampling</b>	Standard test methods provided or additional methods can be developed using Griffin System Software
<b>Operation</b>	5-40 °C



## AUTOSAMPLER

For applications that require traditional syringe injections, the autosampler accessory can provide automation and precision to the liquid analysis process. Prepared liquid samples are placed into the autosampler tray, which holds up to 120 sample vials. Based on the selected sampling test, the arm will move to the desired vial, extract a precise sample amount, and inject it into the GC/MS. The autosampler syringe integrates seamlessly with the standard injector. Once the sample is injected, the Griffin GC/MS will complete a full analysis. The autosampler accessory is a proven solution for expedited sample processing, while the Griffin GC/MS offers gold standard chemical identification.

<b>Use Profile</b>	Compatible with all Griffin GC/MS models; used for SSE, general chemical analysis, research, and rapid sample processing
<b>Size / Weight</b>	EST Analytical Cobra L/S: 25 x 10 x 17 in (63.5 x 35.5 x 43.2 cm) / 17.3 lbs (7.8 kg)
<b>Collection Phase</b>	Solid or liquid mixed in organic solvent
<b>Power</b>	100-240 VAC; 50-60 Hz
<b>Sampling</b>	Standard test methods provided or additional methods can be developed using Griffin System Software
<b>Operation</b>	5-40 °C; holds up to 120 sample vials — 2 ml, 12 mm x 32 mm vials; 2 Solvent, 1 or 2 Waste, 10 ml vials



## MANUAL HEADSPACE SAMPLER

The manual headspace sampling accessory provides the ability to prepare water or soil samples and then inject them into the Griffin GC/MS for analysis. Users can place up to six vials containing water or soil samples into the vial tray. The sampler then heats the vials, which sends any volatile organic compounds into the vapor headspace. Using the syringe holder, the user manually draws an air sample from the headspace into the gas tight syringe and then injects the air sample into the injector. The Griffin GC/MS analyzes the sample according to previously determined method parameters and performs full identification of any VOCs found in the sample.

<b>Use Profile</b>	Compatible with all Griffin GC/MS models; used for environmental analysis and incident response
<b>Size / Weight</b>	Teknokroma TR-132300 Static Headspace Sampler
<b>Collection Phase</b>	Solid or liquid mixed in organic solvent
<b>Power</b>	100-240 VAC; 50-60 Hz
<b>Sampling</b>	Standard test methods provided or additional methods can be developed using Griffin System Software



FLIR offers a revolutionary solution to the complicated challenge of field sampling with the PSI-Probe accessory. The PSI-Probe is directly compatible with the robust Griffin G500-series GC/MS systems. The strengths of this analytical platform include the ability to transfer ultra-trace residues to the GC/MS system and perform field characterizations and positive identification of chemicals within 15 minutes, all without the use of conventional sample preparation.

The PSI-Probe is supplied in a ruggedized transport case, complete with a staging base, vial of TAGs, Twister Kit, Reverse Action Tweezers, spares kit, and an operator manual. The analytical platform contains pre-loaded methods and an updated mass spectral library presented in a unique, simplified user interface. This allows both advanced users and beginners to utilize the system to their expertise level.



## PSI-PROBE WITH TOUCH-AND-GO (TAG)

Traditional sample preparation techniques are eliminated with the simple-to-use Touch-and-Go (TAG) technology, which allows users to quickly collect solid or liquid samples. No solvents, dilutions, or wet chemistry are needed when using TAG. Simply touch or tap the TAG to your sample. After collecting the sample, the sampling end is broken into the microvial, which is then placed directly into the PSI-Probe. The PSI-Probe is inserted into the adapter on the GC/MS injector. The injector thermally extracts chemical components from the sample, while the GC/MS performs subsequent chemical identification.



## PSI-PROBE WITH GERSTEL-TWISTER

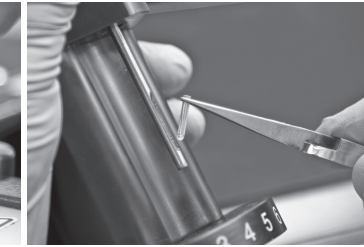
The GERSTEL-Twister is a unique sampling tool. It is fast, eliminates the need for solvents, and is up to 1000 times more sensitive than SPME. It uses SBSE (stir bar sorptive extraction) to collect organic compounds directly from liquid samples, like drinking or waste water, bodily fluids, or beverages. The Twister adsorbs and concentrates the organic contents onto its sorbent coating. Solid and vapor headspace samples can also be tested via Twister. Simply drop the Twister in a sample vial containing the liquid or solid and seal the vial. Then place the Twister vial on a stir plate. Remove, rinse, dry, and drop the SBSE into the PSI-Probe for thermal extraction and subsequent GC/MS analysis.



Collect sample with TAG



Break TAG into vial



Drop vial into PSI-Probe



Insert PSI-Probe into injector port

### SPECIFICATIONS

<b>Use Profile</b>	Compatible with all Griffin GC/MS models; used for forensic and environmental analysis and incident response
<b>Size / Weight</b>	3 x 6 in (7.6 x 15.2 cm) / 3 lbs (1.4 kg)
<b>Collection Phase</b>	Direct sampling of liquid, solid, and trace residues
<b>Power</b>	N/A
<b>Sampling</b>	Standard test methods provided or additional methods can be developed using Griffin System Software™
<b>TAG</b>	Pre-scored glass capillary that collects ultra-trace residues for direct analysis

<b>Use Profile</b>	Compatible with all Griffin GC/MS models; used for forensic, food, and environmental analysis
<b>Size / Weight</b>	3 x 6 in (7.6 x 15.2 cm) / 3 lbs (1.4 kg)
<b>Collection Phase</b>	Direct sampling of liquids and headspace sampling of solids
<b>Power</b>	N/A
<b>Communications</b>	Onboard software and display for operation and commands
<b>Sampling</b>	Standard test methods provided or additional methods can be developed using Griffin System Software™
<b>Twister</b>	Reusable Polydimethylsiloxane (PDMS)-coated stir bar (other options available)

WASHINGTON, DC  
Corporate Headquarters  
FLIR Systems, Inc.  
1201 S. Joyce Street  
Suite C006  
Arlington, VA 22202  
PH: +1 703.682.3400

PORTLAND  
FLIR Systems, Inc.  
27700 SW Parkway Ave.  
Wilsonville, OR 97070  
PH: +1 866.477.3687

WEST LAFAYETTE  
Flir Detection, Inc.  
3000 Kent Ave.  
West Lafayette, IN 47906  
PH: +1 765.775.1701

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

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

ABU DHABI, UAE  
FLIR Systems B.V.  
Wadi Al Fey St., BLDG C-29  
Office# 302  
New Ministries Complex –  
Abu Dhabi, U.A.E.  
PH: +971 2 666 1561  
Fax: + 971 2 666 1562  
P.O. Box 146818

LATIN AMERICA  
FLIR Systems Brasil  
Av. Antonio Bardella,  
320 Sorocaba,  
SP 18085-852  
Brasil  
PH: +55 15 3238 8070

CHINA  
FLIR Systems Co., Ltd  
Rm 1613-16, Tower II  
Grand Central Plaza  
138 Shatin Rural Committee Rd.  
Shatin, New Territories  
Hong Kong  
PH: +852 2792 8955

BELGIUM  
FLIR Systems  
Luxemburgstraat 2  
2321 Meer  
Belgium  
PH: +32 (0) 3665 5100

UNITED KINGDOM  
FLIR Systems UK  
2 Kings Hill Ave., Kings Hill  
West Malling, Kent  
ME19 4AQ  
United Kingdom

SINGAPORE  
FLIR Systems, Inc.  
49 Nankin Street, #03-49  
Nankin Row  
Singapore 048660  
PH: +65 6822 1596

detection@flir.com  
www.flir.com  
NASDAQ: FLIR

©2021 FLIR Systems, Inc. All rights reserved.



The World's **Sixth Sense**®