FLIR GRIFFIN™
G500 SERIES

Accessories and Consumables

Environmental Contaminant Analysis
Forensic/Arson Investigation
Emergency Response
Building Air Monitoring
Law Enforcement
Sensitive Site Exploitation
**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 techniques. Within 15 minutes, the systems accurately detect and identify explosives, drugs, CWAs, TICs, environmental pollutants, and other chemicals.

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**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

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**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

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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.

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.

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.

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

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<table>
<thead>
<tr>
<th>Use Profile</th>
<th>Compatible with all Griffin GC/MS models; used for SSE, forensic and environmental analysis, incident response, and events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size / Weight</td>
<td>N/A</td>
</tr>
<tr>
<td>Collection Phase</td>
<td>Solid or liquid mixed in organic solvent</td>
</tr>
<tr>
<td>Power</td>
<td>N/A</td>
</tr>
<tr>
<td>Sampling</td>
<td>Standard test methods provided or additional methods can be developed using Griffin System Software</td>
</tr>
<tr>
<td>Operation</td>
<td>5-40 °C</td>
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<tr>
<th>Use Profile</th>
<th>Compatible with all Griffin GC/MS models; used for environmental analysis and incident response</th>
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<tbody>
<tr>
<td>Size / Weight</td>
<td>N/A</td>
</tr>
<tr>
<td>Collection Phase</td>
<td>Direct liquid or vapor headspace</td>
</tr>
<tr>
<td>Power</td>
<td>N/A</td>
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<tr>
<th>Use Profile</th>
<th>Compatible with all Griffin GC/MS models; used for general chemical analysis, research, and rapid sample processing</th>
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<tr>
<td>Size / Weight</td>
<td>EST Analytical Cobra L/S: 15 x 10 x 17 in (63.5 x 35.5 x 43.2 cm) / 17.3 lbs (7.8 kg)</td>
</tr>
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<tr>
<td>Power</td>
<td>100-240 VAC; 50-60 Hz</td>
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<tr>
<td>Operation</td>
<td>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</td>
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<tr>
<td>Size / Weight</td>
<td>Teknokroma TR-132300 Static Headspace Sampler</td>
</tr>
<tr>
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<td>Solid or liquid mixed in organic solvent</td>
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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 adsors 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.

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**SPECIFICATIONS**

**INJECTOR-COMPATIBLE SampLERS**

**Use Profile**

- Compatible with all Griffin GC/MS models; used for forensic and environmental analysis and incident response
- Compatible with all Griffin GC/MS models; used for forensic, food, and environmental analysis

**Size / Weight**

- 3 x 6 in (7.6 x 15.2 cm) / 3 lbs (1.4 kg)
- 3 x 6 in (7.6 x 15.2 cm) / 3 lbs (1.4 kg)

**Collection Phase**

- Direct sampling of liquid, solid, and trace residues
- Direct sampling of liquid, solid, and headspace sampling of solids

**Power**

- N/A
- N/A

**Sampling**

- Standard test methods provided or additional methods can be developed using Griffin System Software™
- Standard test methods provided or additional methods can be developed using Griffin System Software™

**TAG**

- Pre-scored glass capillary that collects ultra-trace residues for direct analysis
- Reusable Polydimethylsiloxane (PDMS)-coated stir bar (other options available)