



## Take Control

IQ/OQ/PQ Kits, Tools and Software  
for Analytical Instrument Qualification

## VKIT-GFM3 Gas Flowmeter

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**Specifically designed for gas chromatography, VKIT-GFM3 enables simple and accurate measurement of gas flow in GC systems.**

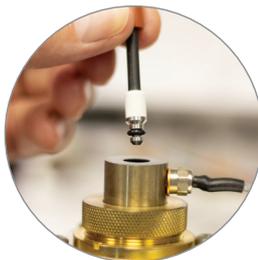
VKIT-GFM3 is the perfect tool for field service engineers and laboratory personnel performing OQ/PQ and other routine performance verification activities. It is supplied with a certificate of calibration.

Flow values are displayed in units of mL/min on a large LCD screen. A USB port is provided for connection to a PC, enabling compliance with the data integrity demands required in GxP environments.

VKIT-GFM3 improves on the classic, proven VKIT-GFM and the now obsolete ADM series flowmeter design by adding a larger LCD display, a re-chargeable Lithium ion battery and improved connectivity via USB.



Simplifies measurement  
of GC flow zones



VKIT-1560 FID adaptor

### Technical specifications

- Accuracy: 0.4 mL/min or  $\pm 2.5\%$  of reading (whichever is greater)
- Resolution: 0.1 mL/min
- Range: 0-500 mL/min (0-300 mL/min CO<sub>2</sub>)
- Inlet Pressure: 25 psi (175 kPa) maximum
- Gases: N<sub>2</sub>, Air, He, H<sub>2</sub>, CO<sub>2</sub>, O<sub>2</sub>, Ar, CH<sub>4</sub>/Ar
- Calibration: Multi-point (0-500 mL/min) with certificate of calibration
- Display: Backlit LCD
- Serial output to PC
- Dimensions: 70 x 133 x 32 mm
- Weight: 155 g
- Battery: Re-chargeable Lithium ion, charging adaptor included or charge via micro-USB cable to PC
- Modes: Flow measurement, linear velocity and split ratio modes

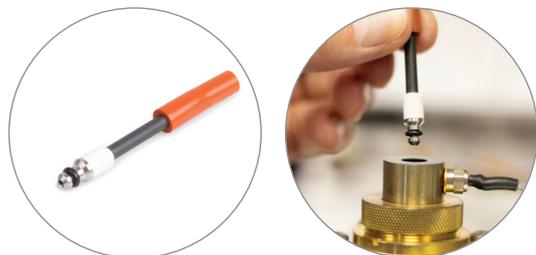
### About V:Kit

V:Kit specialise in delivering solutions for Analytical Instrument Qualification. With a comprehensive range of measuring tools, software, protocols, standard operating procedures and certified standards, V:Kit products are used by OEMs, service providers and pharmaceutical laboratories worldwide.

**Take control of your qualification needs with V:Kit.**

# Flow adaptor

VKIT-GFM3 can be specified with the optional VKIT-1560 FID adaptor for Agilent 6890 & 7890 GCs & Hewlett Packard 5890 GC. The adaptor connects the FID directly and easily to the inlet tube of the VKIT-GFM3 gas flowmeter. This allows easy measurement of H<sub>2</sub>, Air and Make up gases directly from the FID exhaust.



## GC Tools

The V:Kit tool range for GC systems includes:

**VKIT-DMA2 pressure meter** for GC inlets, including split-splitless inlet adaptor.

**VKIT-DTM2 2-channel thermometer** with optional connectivity to GC software.

**VKIT-1531 2-channel printing thermometer** with built-in printer for simple, effective traceability.

**VKIT-1517 GC inlet probe** a thermocouple in a septum piercing needle for temperature measurement in GC inlets (split-splitless and packed).

**VKIT-1518 GC headspace probe** flexible steel capillary for temperature measurement within the transfer line of GC headspace sampler.

**VKIT-1519 GC column oven probe** 6"/150mm diameter cage thermocouple with a flexible steel cable suitable for inserting through GC door insulation.

## Ordering codes

VKIT-GFM3	V:Kit Gas Flowmeter, with calibration certificate
VKIT-1560	FID adaptor

## Ordering information

Order online at [www.v-kit.com](http://www.v-kit.com).  
We accept payment with VISA, MasterCard and Bank Transfer in EUR, USD and GBP currencies.

Or send your Purchase Order to [sales@v-kit.com](mailto:sales@v-kit.com).

## VKIT-GFM3 Gas Flowmeter

## V:Kit 5 AIQ Software

**VKIT-GFM3 is compatible with V:Kit 5 analytical instrument qualification software. Qualify your laboratory systems with a 21 CFR Part 11 compliant package**

- Generate comprehensive qualification documents with full traceability.
- Create, manage, and distribute secure, version controlled executable qualification protocols directly linked to Standard Operating Procedures and Certificates of Analysis.
- Manage your Analytical Equipment database.
- Share qualification results and protocols with your team. User account management with password expiry and security roles.
- Electronic Signatures, Audit Trail, Deviation Reporting.

**Available for HPLC/UPLC, GC/GCMS, LCMS and MS/MS, Dissolution and UV-Vis.**

## GC AIQ Software

**GC Software includes a wide range of tests for IQ/OQ/PQ for most GC configurations – FID, ECD, TCD, MS, with liquid or headspace.**

- Inlet Pressure Accuracy
- Flow Rate Accuracy for inlet gases – split and purge
- Flow Rate Accuracy for detector gases
- Inlet temperature
- Column Oven Temperature Accuracy and Stability
- Column Oven Accuracy across Operating Range
- Injection Precision and Carryover (including RT precision)
- Response Linearity FID
- Noise and Drift
- Signal-to-noise