



Take Control

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

VKIT-DTM2 2-Channel digital thermometer

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Ideal for use for HPLC and GC testing, VKIT-DTM2 is a 2-Channel digital thermometer which enables simple and accurate measurement of temperatures in chromatographic systems using a range of customised thermocouple probes.

Supplied with a certificate of calibration and in a robust carry case, VKIT-DTM2 is the perfect tool for field service engineers and laboratory personnel performing OQ/PQ and other routine performance verification activities. The unit's protective rubber boot includes a magnet (useful to attach the thermometer to metal GC oven doors) and a built-in stand.

Temperature values are displayed in units °C or °F, 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.

Using VKIT-DTM2 with the optional AutoTemp software enables automated collection and reporting of temperature values: particularly useful when measuring the multiple zones found in GC or HPLC/UPLC systems.

DTM2 improves on the classic, proven VKIT-1531 design by adding a larger LCD display and improved connectivity via USB.

Thermometer specifications

- **Range and Accuracy (Type K)**
-200-1370°C, +/- (0.1% rdg +0.7°C),
-328-2498°F, +/- (0.1% rdg +1.4°F)
- **Resolution: 0.1°C (in range of -200-650°C)**
- **Multi-point calibration (0, 25, 50, 100, 250 & 400°C.) with calibration certificate**
- **Backlit LCD display size: 30 x 51 mm**
- **Dual input (for Type K, J, and T thermocouples)**
- **Supplied with 2 x VKIT-1516 Type K thermocouple probes**
- **Serial output to PC (requires optional cable)**
- **Dimensions: 182 x 72 x 30mm (L x W xD)**
- **Weight: 150g**
- **Battery 9V, PP9 or equivalent**
- **Protective rubber boot including stand and magnetic holder**



Simplifies testing of GC zones



VKIT-1517 inlet probe

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.

Thermocouple Probes

VKIT-DTM2 is supplied with VKIT-1516 - two general purpose Type K Thermocouple probes.

These are useful for low temperature applications (2 – 90 °C) such as HPLC column compartments. V:Kit has developed a range of specialised thermocouple probes to simplify the task of making accurate and reliable measurements.

VKIT-1517 GC Inlet Probe has a Type K thermocouple mounted at the tip of 51mm needle. This allows temperature measurement of the inlet at precisely the position that the tip of a standard injection syringe would reach when injecting a sample. Most manufacturers split-splitless and packed inlets are compatible with this probe including Agilent, Shimadzu and Perkin Elmer.

VKIT-1521 GC Inlet Probe has a 150mm needle, necessary for some GC inlets.

* Note thermocouple probes are supplied without calibration. To specify calibration add a RECAL-VKIT-151X part code to your order.

VKIT-1519 GC column oven probe has a 1.0 metre flexible stainless steel body with a Type K thermocouple mounted at the tip. It can be inserted between the GC oven wall and door without damaging the probe.

VKIT-1514 Autosampler/Sample Manager Probe, has a Type K thermocouple mounted in a 2ml autosampler vial (12x32 mm) shaped body. The base of the vial has a stainless-steel base to ensure good contact with the sample compartment of an autosampler and high thermal mass for measurement stability.

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More about V:Kit 5.1 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.

GLP / Data Integrity

AutoTemp is an optional software module. It is available as standalone (temperature only) or as part of the V:Kit 5 Analytical Instrument Qualification package.

Temperature values are read directly from the thermometer into V:Kit AutoTemp software to produce an audit-friendly and traceable calibration report which evaluates the temperature accuracy and precision of your GC, HPLC and UPLC equipment.

V:Kit Take Control Software for Analytical Instrument Qualification		HPLC Column Temperature Accuracy Certificate			
Certificate Number: 20181205-095134-9 Protocol: Unplanned set of tests on 05 December 2018 09:37:52 SOP Reference: SOP V5-EQ-V50 HPLC Column Temperature Accuracy.pdf					
Qualification Date: 05-Dec-2018 Qualifier: V:Kit Support					
Customer Name: V:Kit Ltd System Location: Congleton Module Serial Number: DE72004910		Module Type: V:Kit Support Test Method Number: VKIT-01542 Test Type: 2-Ch-Thermometer Calibration Expiry: 04-Dec-2017			
Tool Certificate: 1234-5678 Tool Serial Number: 5555-DTM Calibration Date: 05-Nov-2018		Scope: This test uses a traceable digital thermometer to qualify a temperature-controlled solution oven for temperature accuracy and stability. Temperature values are acquired via USB to ensure data integrity.			
Accuracy and Precision					
Position:	Left	Right	Left	Right	
Set Temp:	28.0 °C	28.0 °C	45.2 °C	45.2 °C	
15 min	Measured Temp	28.1 °C	Measured Temp	45.0 °C	
24 min	28.1 °C	28.0 °C	45.2 °C	45.0 °C	
33 min	28.1 °C	28.0 °C	45.1 °C	45.0 °C	
43 min	28.2 °C	28.0 °C	45.1 °C	45.0 °C	
53 min	28.1 °C	28.0 °C	45.1 °C	45.0 °C	
Mean:	28.1 °C	28.0 °C	45.2 °C	45.0 °C	
SD:	0.1 °C	0.1 °C	0.1 °C	0.0 °C	
Deviation:	0.1 °C	0.2 °C	0.2 °C	0.0 °C	
Limit:	±0.20 %	±0.20 %	±0.20 %	±0.20 %	
Status:	Pass	Pass	Pass	Pass	
ASD:	0.17 %	0.17 %	0.14 %	0.10 %	
Limit:	±0.200 %	±0.200 %	±0.200 %	±0.200 %	
Status:	Pass	Pass	Pass	Pass	
Overall Test Status: Pass					
Additional Documents Related to this Test: Certificate of calibration of thermometer					
Role	Name	Signature	Date		
Qualifier	Neil Gowans		05-Dec-2018		
Reviewer					

Typical Temperature Report

V:Kit Take Control Software for Analytical Instrument Qualification	
Certificate Number: 20181205-095134-9 Protocol: Unplanned set of tests on 05 December 2018 09:37:52 SOP Reference: SOP V5-EQ-V50 HPLC Column Temp	
Qualification Date: 05-Dec-2018 Qual:	
Customer Name: V:Kit Ltd System Location: Congleton Module Serial Number: DE72004910 Module Model Number: 013156A	Test Method Number: VKIT-01542 Test Type: 2-Ch-Thermometer Calibration Expiry: 04-Dec-2017
Tool Certificate: 1234-5678 Tool Serial Number: 5555-DTM Calibration Date: 05-Nov-2018	
Scope: This test uses a traceable digital thermometer to qualify a temperature-controlled solution oven for temperature accuracy and stability. Temperature	

Ordering codes

VKIT-DTM2	V:Kit 2-Channel Digital Thermometer, with calibration certificate
VKIT-1514	HPLC autosampler tray probe
VKIT-1516	HPLC column oven temperature probe (x2)
VKIT-1517	GC inlet (split-splitless and packed) temperature probe
VKIT-1519	GC column oven temperature probe
V5-0011	AutoTemp Starter Bundle, includes software licence and USB cable

Ordering information

Order online at 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.