UKAS CALIBRATION, SERVICE & REPAIR



Regular thermometer calibration promotes safety, quality control and helps prevent potential issues that may arise from inaccurate temperature measurements.

UKAS is the National Accreditation Body for the United Kingdom. When UKAS accredits a laboratory, its tests are completed to the highest standard in the country.

At ETI, we have a calibration laboratory for temperature and humidity measurements, which is accredited to UKAS ISO/IEC 17025 standards. Customers can send the following instruments to us for UKAS calibration:

- Thermometers and probes
- Temperature data loggers
- Humidity meters and loggers
- Test caps

CALIBRATION VS CERTIFICATION

A calibration test compares your thermometer measurements with a traceable device or reference thermometer. The test is carried out using a known temperature source, such as ice water at 0 °C. A calibration certificate shows the results of the test and certifies the accuracy of the instrument.

HOW OFTEN TO CALIBRATE THERMOMETERS

How often you check your thermometer accuracy depends on several factors, including industry standards, regulatory requirements, and frequency of use.

In many industries, including food service, the general recommendation is to check them at least once a month. You can do this yourself using calibration equipment, such as ice baths.

It's recommended to send your thermometer to a laboratory for certification every 12 months. Keeping a calibration record is essential for demonstrating compliance with regulatory requirements.

CALIBRATION POINTS

Calibration points are the temperatures at which the thermometer has been calibrated to. The number of checkpoints you opt for depends on your requirements, and we can complete as many as you need.

A common number of checkpoints to choose from is 3 or 5. It's customary to choose a 5-point certificate for thermometers where high accuracy is critical. The more checkpoints there are, the more confident you can be that your thermometer is accurate across a range of temperatures.

UKAS TEMPERATURE CALIBRATION

- Thermometer temperature range -100 to 250 °C
- Rapid turnaround normally within 5 days
- Certified uncertainties (CMCs) from ±0.02 °C
- 1 to 5-point UKAS Certificates

Our in-house UKAS accredited calibration laboratory for temperature has a wide measurement range of -100 to 250 °C with a calibration and measurement capability of 0.02 °C. The laboratory can also measure resistance up to 10 M Ω (i.e. resistance decade boxes and PT100/RTD temperature simulators) and DC voltage 0 to 100 mV (i.e. thermocouple simulators and calibrators). Original UKAS Certificates provide proof that instruments and probes have been calibrated against nationally approved standards.

• Thermometers & Probes

Each UKAS Certificate indicates the deviations from standards at various check points, the standard being -18, 0, 40, 70 and 100 °C with a guaranteed uncertainty, dependant on the probe type. See calibration and measurement capability table below.

• Test Caps & Simulators

Each UKAS Certificate indicates the deviations from standards at specific check points (-18, 0, 3, 70 and 100 °C) to an uncertainty of ± 0.1 °C (resistance) or ± 0.15 °C (thermocouple).

Data loggers

Each UKAS Certificate indicates the deviations from standards at three check points (-18, 0 and 40 °C) to an uncertainty of ± 0.05 °C.



Order code	UKAS Certificate - Temperature
890-200-5	Instrument only standard 5-point
890-210-5	Instrument & probe system 5-point
890-215	Checker 3-point
890-230	Test cap 1-point
890-235	Simulator 5-point
890-240-3	Data logger 3-point





CALIBRATION & MEASUREMENT CAPABILITY (CMC)

Thermistor thermo	meter & probe
-50 to 150 °C	CMC 0.04 °C
-100 to -50 °C	CMC 0.05 °C
PT100 (resistance s	ensors) thermometer & probe
-80 to 250 °C	CMC 0.04 °C
-100 to -80 °C	CMC 0.13 °C
Thermocouple ther	mometer & probe
-80 to 250 °C	CMC 0.15 °C
-100 to -80 °C	CMC 0.17 °C
Temperature data l	oggers
-50 to 100 °C	CMC 0.05 °C
Thermistor & PT100	test caps
-18 to 100 °C	CMC 0.1 °C
Thermocouple sime	ulators
-200 to -50 °C	CMC 0.25 °C
-50 to 1372 °C	CMC 0.15 °C

UKAS HUMIDITY CALIBRATION

- Certified uncertainties (CMCs) from 0.7 %rh, 0.19 °Cdp & 0.14 °C Air
- Flexible certification select the points you need
- Qualified & experienced laboratory personnel
- Rapid turnaround



Our in-house humidity laboratory is equipped with two of the world's premier humidity chambers together with a high accuracy mirror hygrometer. The Thunder Scientific 2500 humidity chamber uses two-pressure technology to generate controlled humidity conditions, which has long been the recognised standard for instrument calibration, test and verification, along with the new state-of-the-art HYGROGEN2 - HG2-XL chamber which generates stable temperature and humidity conditions in rapid time. These methods of generation are a fundamental technology, enabling confidence in traceability to National Standards. This, combined with MBW referenced mirror hygrometers, ensures the standard of calibration is to a very high level. If you then combine this with UKAS Accreditation. and a rapid turnaround of your instrument, you can be sure that the service offered by our humidity laboratory will meet your requirement.



Order code	UKAS Certificate - Humidity
890-110	3-point 25, 50 & 75 %rh
890-112	1-point customer specified
890-114	5-point customer specified
Order code	UKAS Certificate - Air Temperature
Order code 890-120	UKAS Certificate - Air Temperature 2-point 10 & 40 °C
Order code 890-120 890-132	UKAS Certificate - Air Temperature 2-point 10 & 40 °C 1-point customer specified



Accurate monitoring of humidity can increase the efficiency of productivity in many aspects of production. An increasing number of employers are also realising the importance of healthy working environments, which includes the control of humidity to help prevent airborne bacteria, eliminate static shocks and reduce eye-strain.

As with most digital equipment, but even more so with hygrometers, there is a tendency for drift over a period of use. Therefore a regular calibration by comparison against Standards, traceable to National Standards, provides confidence in the continued accuracy of your instrument.

• Air temperature capability

Our humidity laboratory is also UKAS accredited for air temperature measurement certification. Please see below for calibration and measurement capability (CMC).

CMC 0.24 °C

CALIBRATION & MEASUREMENT CAPABILITY (CMC)

Humidity

 10 to 90 %rh @ 0 to 60 °C
 CMC 1.2 %rh

 10 to 90 %rh @ 20 to 24 °C
 CMC 0.7 to 1.1 %rh

Air temperature

0 to 60 °C

Alternative temperature points can be offered to customer requirements, please contact our Service department for further details.

SERVICE & REPAIR OF THERMOMETERS & PROBES

- Additional one year's guarantee on repaired instruments
- Thermometer, probe & recalibration service available
- Rapid turnaround normally within 5 days
- Qualified & experienced technicians

One of the true advantages of being a manufacturer is that we know how our instruments work and how to repair them. We are fully committed to supporting our customers, no matter which instrument they have chosen. Our service department is equipped with the best of resources and all repairs are undertaken in-house to give an unrivalled after-sales-service.

The vast majority of instruments that are damaged through use in busy commercial environments can be repaired. Naturally, if the instrument is outside the warranty period, there is a charge. But we wish to make customers aware that it can be cost-effective to repair an instrument, rather than throw it away and buy a new one.



Order code	Description - Repair
890-254	Waterproof thermometers
890-257	Therma Series probe thermometer
890-295	ThermaData loggers
890-303	Thermapen Classic thermometers
890-310	Therma series thermometers
890-318	CaterTemp Metal thermometer
890-319	Therma Metal thermometer
890-403	Thermapen/IR thermometers
890-500	TempTest thermometers
890-570	BlueTherm thermometers
890-670	RayTemp infrared thermometers
890-690	ThermaData Wi-Fi loggers
890-700	Reference Thermometer
890-800	8000/8100 pH Meters
890-850	8100 Plus pH Meter



Whilst an annual calibration check is all you may need for continued confidence in your instrument, there are times when you may wish for the added assurance of a full service, which includes a recalibration and the added benefit of a further one year's guarantee.

Instruments for service or repair should be sent to your local distributor or direct to ETI, carriage paid and labelled with the sender's name, address, telephone number and a brief description of the problem to assist with rapid diagnosis.

Contact our after-sales team for advice on any non-ETI units you wish to have repaired or calibrated. The prices quoted in our price list below are a guide, for a more comprehensive price structure, please contact our after-sales team.

Order code	Description - Recalibration	
894-254	Waterproof thermometers	
894-257	Therma series probe thermometer	
894-303	Thermapen thermometers*	
894-310	Therma series thermometers	
894-318	CaterTemp Metal thermometer	
894-319	Therma Metal thermometer	
894-331	MicroTherma thermometers	
894-500	TempTest thermometers	
*excludes Thermapen IR		

Order code	Description - Probe repair
890-400	Thermocouple probe
890-410	Thermistor probe
890-420	PT100 probe