

# UKAS CALIBRATION, SERVICE & REPAIR



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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
- Certified uncertainties (CMCs) from  $\pm 0.027$  °C
- Custom points available



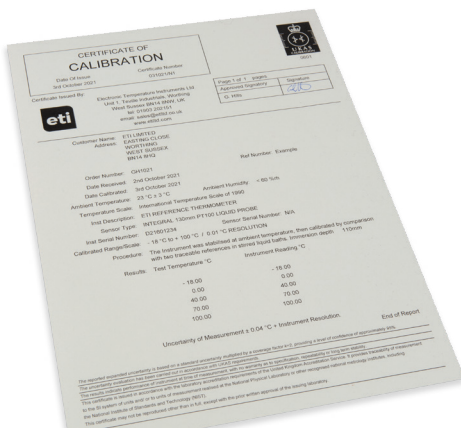
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Our in-house UKAS accredited calibration laboratory for temperature has a wide measurement range of -100 to 250 °C with a calibration and measurement capability of  $\pm 0.027$  °C. The laboratory can also measure resistance up to 1 M $\Omega$  (i.e. 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  $\pm 0.1$  °C (resistance) or  $\pm 0.15$  °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  $\pm 0.06$  °C.

UKAS CALIBRATION



## CALIBRATION & MEASUREMENT CAPABILITY (CMC)

|   |                |                   |
|---|----------------|-------------------|
| <b>Thermistor thermometer &amp; probe</b>                 | -50 to 150 °C  | CMC $\pm 0.06$ °C |
| <b>PT100 (resistance sensors) thermometer &amp; probe</b> | -80 to 250 °C  | CMC $\pm 0.06$ °C |
|   | -100 to -80 °C | CMC 0.13 °C       |
| <b>Thermocouple thermometer &amp; probe</b>               | -80 to 250 °C  | CMC 0.15 °C       |
|   | -100 to -80 °C | CMC $\pm 0.19$ °C |
| <b>Temperature data loggers</b>                           | -50 to 100 °C  | CMC $\pm 0.06$ °C |
| <b>Thermistor &amp; PT100 test caps</b>                   | -18 to 100 °C  | CMC 0.1 °C        |
| <b>Thermocouple simulators</b>                            | -200 to -50 °C | CMC $\pm 0.42$ °C |
|   | -50 to 1372 °C | CMC 0.15 °C       |

| Order code | UKAS Certificate - Temperature    | £ each |
|------------|-----------------------------------|--------|
| 890-200-5  | Instrument only standard 5-point  | 86.00  |
| 890-210-5  | Instrument & probe system 5-point | 76.00  |
| 890-215    | Checker 3-point                   | 74.00  |
| 890-230    | Test cap 1-point                  | 22.00  |
| 890-235    | Simulator 5-point                 | 86.00  |
| 890-240-3  | Data logger 3-point               | 76.00  |



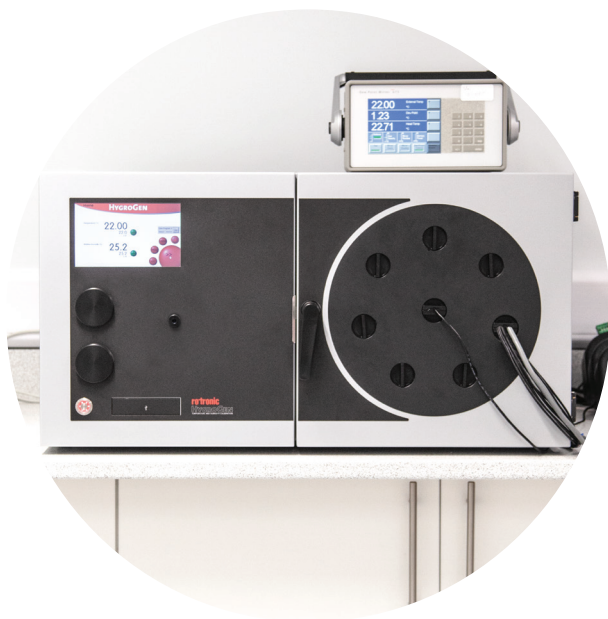
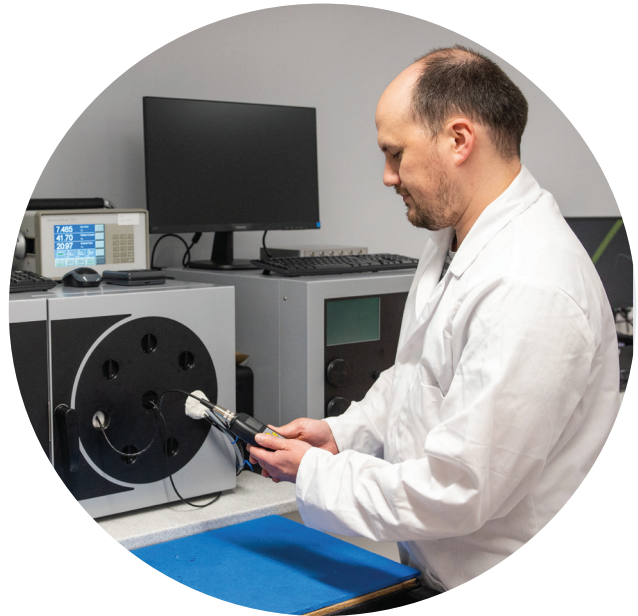
# UKAS HUMIDITY CALIBRATION

- Certified uncertainties (CMCs) from 0.3 %rh, 0.18 °Cdp & 0.18 °C Air
- Flexible certification - select the points you need
- Qualified & experienced laboratory personnel
- Rapid turnaround



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Our in-house humidity laboratory is equipped with two of the world's premier state-of-the-art HYGROGEN2 - HG2-XL humidity chambers which generate stable temperatures 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.



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).

## CALIBRATION & MEASUREMENT CAPABILITY (CMC)

| Humidity                   |                    |
|----------------------------|--------------------|
| 10 to 90 %rh @ 0 to 60 °C  | CMC 2 %rh          |
| 10 to 90 %rh @ 20 to 25 °C | CMC 0.3 to 1.1 %rh |
| Air temperature            |                    |
| 0 to 60 °C                 | CMC 0.24 °C        |

| Order code | UKAS Certificate - Humidity        | £ each |
|------------|------------------------------------|--------|
| 890-110    | 3-point 25, 50 & 75 %rh            | 170.00 |
| 890-112    | 1-point customer specified         | 110.00 |
| 890-114    | 5-point customer specified         | 320.00 |
| Order code | UKAS Certificate - Air Temperature | £ each |
| 890-120    | 2-point 10 & 40 °C                 | 170.00 |
| 890-132    | 1-point customer specified         | 110.00 |
| 890-134    | Additional specified point         | 60.00  |

Alternative temperature points can be offered to customer requirements, please contact our After-sales team for further details.

# SERVICE & REPAIR OF THERMOMETERS & PROBES

- Additional one year's guarantee on repaired instruments
- Thermometer, probe & recalibration service available
- Rapid turnaround
- 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.



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, following our online returns form on our website. You will then receive a confirmation email with a unique case number and details of how to return your instrument to us.

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 - Repair            | £ each |
|------------|---------------------------------|--------|
| 890-103    | Thermapen ONE thermometers      | 32.00  |
| 890-254    | Waterproof thermometers         | 49.00  |
| 890-257    | Therma Series probe thermometer | 37.00  |
| 890-295    | ThermaData loggers              | 37.00  |
| 890-303    | Thermapen Classic thermometers  | 23.00  |
| 890-310    | Therma series thermometers      | 35.00  |
| 890-318    | CaterTemp Metal thermometer     | 60.00  |
| 890-319    | Therma Metal thermometer        | 60.00  |
| 890-403    | Thermapen IR thermometers       | 40.00  |
| 890-500    | TempTest thermometers           | 38.00  |
| 890-570    | BlueTherm thermometers          | 56.00  |
| 890-670    | RayTemp infrared thermometers   | 36.00  |
| 890-690    | ThermaData WiFi loggers         | 57.00  |
| 890-700    | Reference Thermometer           | 55.00  |
| 890-800    | 8000/8100 pH Meters             | 37.00  |
| 890-850    | 8100 Plus pH Meter              | 56.00  |

| Order code             | Description - Recalibration     | £ each |
|------------------------|---------------------------------|--------|
| 894-254                | Waterproof thermometers         | 31.60  |
| 894-257                | Therma series probe thermometer | 31.60  |
| 894-303                | Thermapen thermometers*         | 24.60  |
| 894-310                | Therma series thermometers      | 31.60  |
| 894-318                | CaterTemp Metal thermometer     | 38.60  |
| 894-319                | Therma Metal thermometer        | 38.60  |
| 894-331                | MicroTherma thermometers        | 38.60  |
| 894-500                | TempTest thermometers           | 24.60  |
| *excludes Thermapen IR |                                 |        |

| Order code | Description - Probe repair | £ each |
|------------|----------------------------|--------|
| 890-400    | Thermocouple probe         | 17.00  |
| 890-410    | Thermistor probe           | 20.00  |
| 890-420    | PT100 probe                | 35.00  |