

ISOTECH

SPRT Calibration Services



SPRT

World Leading Resistance Thermometer Calibration

Isotech can calibrate SPRTs to the very lowest of uncertainties. Our Primary Laboratory uses the very best ITS-90 Fixed Point Cells and Furnaces to calibrate SPRTs to uncertainties as low as 1mK (0.001°C) at Indium freeze point 156.5985°C rising to just 2mK at Aluminum freeze point, 660.323°C.

This level of world leading uncertainty requires not just the best temperature standards, procedures and experience but it requires good immersion depth – laboratory SPRTs usually have a minimum length of 480mm – needed for calibration in metrology furnaces with optimal fixed points.

SPRTs are best calibrated in ITS-90 cells in large furnaces with a minimum immersion of 450mm. Shorter secondary SPRTs, which are too short for this, can be calibrated cost-effectively in ISOTowers. Longer SPRTs can also be calibrated in ISOTowers at a reduced cost if the lowest uncertainties are not required.



Excellence in SPRT Calibration

Comprehensive Services & Expertise

Isotech provides comprehensive calibration services for Standard Platinum Resistance Thermometers (SPRTs), offering both comparison and fixed-point calibrations which provide unrivalled precision for a diverse range of customer applications. Since 1986 our laboratory has been accredited and offers an unrivalled variety of calibration options, trusted by National Metrology Institutes (NMIs) worldwide.

Comparison Calibration Services: Our comparison calibration services involve calibrating SPRTs by directly comparing them against a reference thermometer under controlled conditions. Using high-performance stirred liquid baths and a fluidized furnace, we ensure precise temperature uniformity and stability. These methods offer flexibility when choosing calibration temperatures. For the highest precision with SPRTs, we recommend primary calibration in fixed-point cells as specified in the ITS-90.



SPRT Calibration Services:

Premium, Standard, and ISOTower Services

Isotech offers three levels of SPRT fixed-point calibration services to accommodate all users: Premium, Standard, and ISOTower.

Premium Service: Provides world-leading low uncertainties with a no-compromise approach. Measurements are taken twice at each fixed point, with a Water Triple Point Measurement carried out following each fixed-point measurement. Self-heating and immersion checks are performed for each fixed-point temperature, with the self-heating reported at each calibration point. Clients include NMIs and leading commercial calibration laboratories.

Standard Service: The most popular option, delivering uncertainties suitable for most accredited laboratories at an attractive price point. The same fixed-point cells are used, with two measurements at each calibration temperature. Initial and final Water Triple Point measurements are reported, with a self-heating calculation. While the uncertainties are slightly higher than our premium service, the cost savings are significant.

ISOTower Calibration Service: Our premium and standard services suit long-stemmed SPRTs, 480mm or longer. For shorter SPRTs, we use our ISOTowers to calibrate SPRTs as short as 300mm. These devices are faster to use than conventional ITS-90 fixed-point cells and offer the most economical ITS-90 fixed-point calibration service. Additionally, those with longer secondary SPRTs can select the ISOTower service for outstanding value in fixed-point calibration.

ITS-90 Fixed Point	Premium	Standard	ISOTower Service
<i>Suitable for SPRT Thermometer Types</i>	<i>Isotech 670SQ</i>	<i>All Isotech SPRT's</i>	<i>Isotech 909 Series</i>
Water Triple Point (0.01°C)	0.1mK	0.5mK	4mK
In Indium (156.5985°C)	1mK	2mK	6mK
Sn Tin (231.928°C)	1mK	2.5mK	8mK
Zn Zinc (419.527°C)	1.2mK	3mK	12mK
Al Aluminium (660.323°C)	2mK	6mK	15mK

Expertise & Training

All our calibration services are performed in our ISO/IEC 17025 accredited laboratory, ensuring internationally recognized results. Our team of experienced experts not only provide world leading calibration services but also train our clients from around the globe. This comprehensive support and consultation help clients select the most suitable calibration services for their specific needs, ensuring optimal performance and reliability of their SPRTs.

We can calibrate SPRTs from other manufacturers, please ask for the level of uncertainty that can be offered.



Our current UKAS schedule & accreditation certificate can be found here:

■ www.isotech.co.uk/laboratories/



Full Range of Calibration Services...

Calibration of
ITS-90 Fixed
Point Cells



Calibration of Standard
Platinum Resistance
Thermometers: SPRTs



Calibration of Industrial
Platinum Resistance
Thermometers: IPRTs



Calibration of
Temperature Indicators



Calibration of
Thermocouples and
Thermocouple
Compensating and
Extension Cables



Calibration of
Ratio Bridges



Calibration of
Temperature
Dataloggers



Calibration of
Standard Resistors



Calibration of
Dry Block Calibrators



ISOTECH

About Us

The world leader in temperature metrology, with over 40 years' experience.

Our clients include the world's leading laboratories including National Laboratories, leading ISO 17025 Accredited Laboratories and users in all industries.

Why Choose Isotech?

- Isotech has solutions for all calibration needs, from Primary Laboratories maintaining National Standards to the needs of field engineers calibrating industrial sensors on site. Isotech is truly "The Source for Calibration Professionals".
- Global Network - local support. Isotech has over 90 authorized sales agents worldwide! No matter where you are, we can offer local support.
- The world's leading National Metrology Institutes choose Isotech - shouldn't you?

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As a leading thermocouple manufacturer, it's crucial for us to check with the utmost precision. Isotech equipment consistently provides the accurate measurements we rely on. We've partnered with Isotech for over 30 years, appreciating not just their high-accuracy products but also their exceptional customer service, insightful advice, and genuine feedback.”

Stephen Holt, Technical & Quality Manager, Scott Precision Wire Ltd

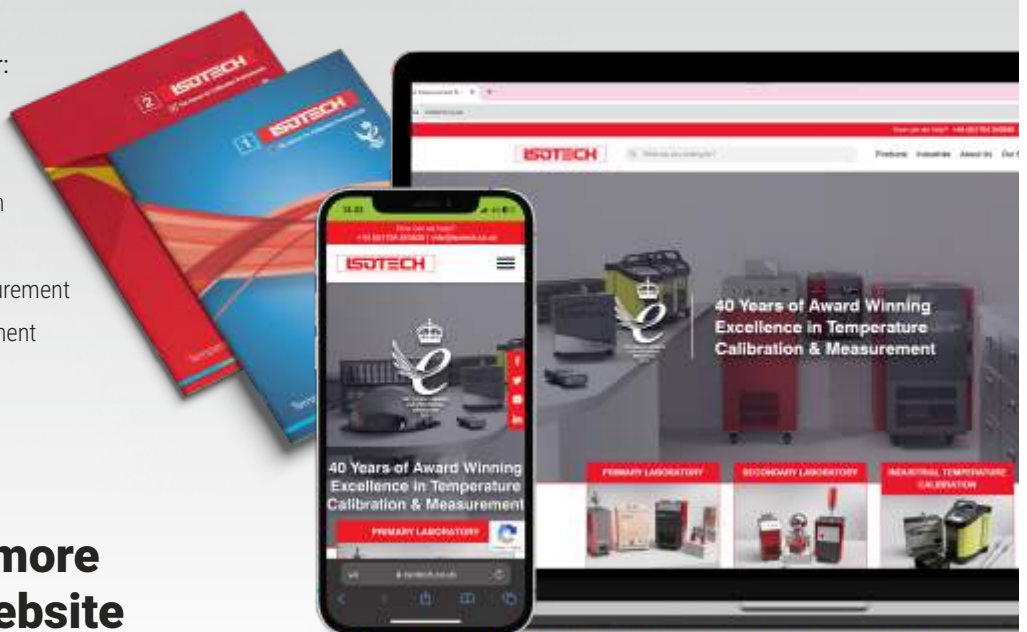
Temperature Metrology Solutions for:

- ITS-90 Primary Standards
- Industrial Sensor Calibration
- Secondary Temperature Calibration
- Infrared Thermometers
- High Accuracy Temperature Measurement
- Thermocouple Referencing Equipment

ISO 17025 calibration services to the smallest of uncertainties and with international recognition



Find out more on our Website



For more information:
ISOTECH.CO.UK

UKAS Calibration Options
ISO 17025

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