

# Isocal-6 Introduction:

## The multifunction temperature calibration system

The award winning ISOCAL-6 consists of a range of temperature calibrators designed to calibrate all temperature sensors. As a multi function temperature calibrator it can be used as a Dry Block with accessories added to allow use as a Stirred Liquid Bath, a Blackbody Source, a Surface Temperature Calibrator, an ITS-90 Fixed Point System and for low temperatures a Stirred Ice Bath.

The ISOCAL-6 is a complete temperature calibration laboratory in a simple easy to use package.

A system designed to expand with you, to fulfill all future calibration needs. Giving the flexibility to add accessories when needed and meet current budgetary demands.



### 1

## Metal Block Bath

A Metal Block Bath, (Dry Block Calibrator) provides fast and clean calibration of thermocouples, PRTs and other industrial temperature sensors. Isotech blocks use a combination of multi zone and advanced materials technology to ensure constant temperature zones to enable high accuracy calibration. Interchangeable 35mm diameter blocks allow several sensors to be calibrated simultaneously with fast heat up and cool down. For larger probes blocks are available up to 65mm diameter and with immersion depth of up to 300mm. An unmatched combination of leading performance and calibration capacity.



### 2

## Stirred Liquid Bath

Remove the metal block and the Isocal-6 can be converted to a stirred liquid bath. Shown is the Drago with 65mm diameter well making it ideal as a portable liquid bath. Liquid bath operation allows angled or awkward shaped probes to be calibrated. Accuracies are much greater than those from Dry Blocks alone and with a suitable reference probe performance of 0.005°C is achievable. In stirred liquid bath mode a reference probe should be used connected to either the SITE indicator, or an external device.



### 3

## Stirred Ice / Water Bath

The ISOCAL-6 models that operate below 0°C can be used to provide a 0°C stirred ice / water bath. This provides a simple low cost way of checking that standards have not drifted in between calibrations.

The Isotech website includes  
ISOCAL-6 video demonstrations

<http://www.isotech.co.uk/video-library.php>

**4**

## Black Body Source

Adding the blackbody target allows the testing of infrared thermometers. Low cost non-contact IR thermometers are increasingly being used in industry and the ISOCAL-6 is ideal to test and check these devices. The IR thermometer is focused on the target and compared to a reference probe in the block pocket.

**5**

## Surface Sensor Calibrator

With the Surface Sensor Kit the test sensor is compared to a platinum resistance thermometer located just below the surface of the block. Again save the cost of buying additional equipment by adding accessories as required to expand the ISOCAL-6 for new calibration applications.

**6**

## ITS-90 Fixed Point Apparatus

For the best possible performance with uncertainties to  $0.0005^{\circ}\text{C}$  (0.5mK) add an ITS-90 Fixed Point Cell. The most popular is the B8 Water Triple Point Cell, it is surprisingly affordable and simple to use - the triple point can be both created and maintained in the apparatus without the need for any other equipment or supplies.