

A Guide to Industrial Temperature Calibration: **Traceable Calibration**

For best practice, the thermometer (or thermometers) under test are placed into the calibration volume alongside a calibrated standard. This is so that the test thermometers “can be related to appropriate standards, generally international or national standards, through an unbroken chain of comparisons”. This “traceability” meets the requirements of quality systems including that of ISO 9000.

Using the Calibrator itself as the Reference (or standard) raises a number of issues, such as how is temperature difference between the test thermometer and the calibrator display determined - how can this ‘uncertainty value’ be known?

International Guidelines have been published from EURAMET, “Guidelines on the Calibration of Temperature Block Calibrators” Calibration Guide 13. Isotech Calibrators meet the calibration capacity requirements of this guide.

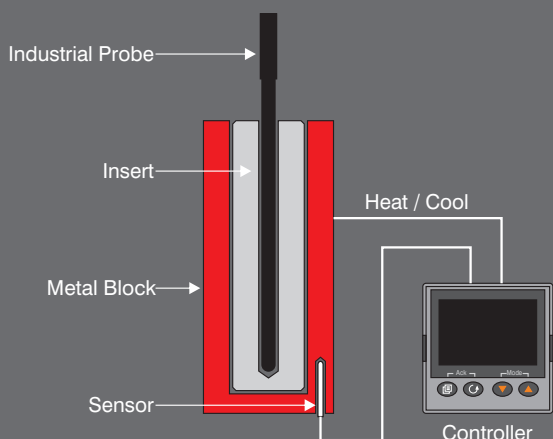
We recommend that a reference probe is used, the same method as used in secondary temperature laboratories. For less demanding calibration, and the quick testing of sensors, the Calibrator can be used without a reference probe, refer to the units Evaluation Report for typical performance data.



Pre-purchase check list

- 1 Does the supplier have an accredited laboratory?**
UKAS accreditation, “the means by which, in the public interest, the integrity and competence of independent evaluators is confirmed and declared”. Isotech can issue a UKAS certificate with the performance expressed in the manner that you will need, not to some confusingly expressed specification that is made with no confirmation of integrity and competence.
- 2 Experience**
Does the producer have experience? Do they understand the difference between accuracy and uncertainty? Can they tell you how to calculate the uncertainty of a probe being calibrated in the block? Isotech can.
- 3 Expandable**
Can the Dry Block be used with other sensors? Are there accessories available for future expansion? With Isotech products they are.
- 4 PC Support**
Can it be connected to a computer? Is there software available, can it be automated? Isotech Dry Block Calibrators have a range of software options.
- 5 Documented**
Is the bath fully documented? Can you download a full evaluation report from the Web Site? Does it come with a comprehensive handbook and tutorial? Is training available? Isotech provide all of these free of charge.
- 6 Practical**
Isotech Dry Blocks are practically designed with a strong metal case, and are a compact portable size. If you are going to carry it around don't forget to check the size and weights. It is surprising how large some other blocks are, even though they take the same number of probes. Beware if the specification does not include the weight.
- 7 Value**
*Check the prices, all the above come at an amazingly competitive price when you choose **Isotech**.*

Dry Block Calibrator of Poor Design



Dry Block Calibrator Meeting ISO9000 Requirements

