

Liquid Baths

Introduction to Liquid Baths

Liquid Baths:

Temperature Range -25°C to 250°C

Portable Stirred Liquid Baths have a large well which is filled with liquid. The liquid is stirred and heated or cooled to the desired temperature.

The temperature sensors are placed directly into the liquid avoiding the need for specially drilled blocks. They are ideal for awkward shaped and short sensors. Angled probes will not readily fit into a metal block but can be placed into the liquid.

Accuracies are in general better than dry block baths due to lack of air gaps and the temperature uniformity of the stirred liquid.

Liquid Bath Advantages

- Calibrate awkward shaped sensors.
- High Accuracy.
- Excellent temperature uniformity.
- Sensors placed into liquid, no specially drilled inserts required.

Portable Liquid Baths

To calibrate temperature sensors to 250°C look no further than these portable stirred liquid baths. The Hyperion calibrates from -25°C (At ambient of 20°C) to 140°C and the Drago from 30 to 250°C. The calibration volume is 65mm diameter and the useable depth of 160mm gives more than twice the volume of alternative products.

Stirred liquid baths are suitable for temperature sensors of all types, shapes and sizes, angled probes, bent probes and short probes with large mounting heads can all be readily accommodated, an advantage over Dry Block Calibrators.

If a laboratory standard temperature indicator is added much greater accuracies than those from Dry Blocks alone can be achieved and with suitable reference thermometers performance of up to 0.005°C is achievable.

These models include a high accuracy inbuilt digital temperature indicator and a reference probe. This independent measurement system is used as a reference to which the thermometers under test are compared. This method gives good accuracy largely eliminating temperature gradient and loading errors and provides traceable temperature calibration.

The data on liquid baths in this book are based on Methanol with some water added to reduce flammability, medium or high temperature silicon oils.

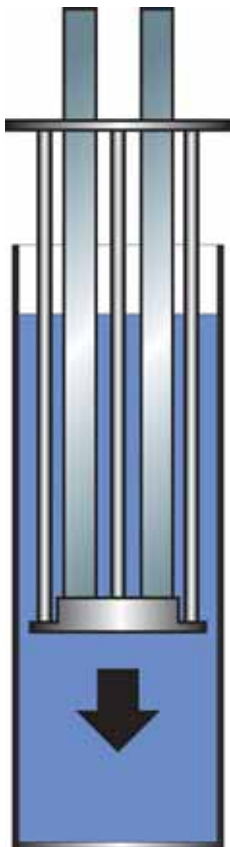
The variety of applications for stirred liquid baths is endless, for example one user works only from -10°C to +50°C. Water with anti-freeze (Ethylene Glycol) added is a cheap and effective liquid over this range, however 100% Ethylene Glycol becomes too viscous at low temperatures to circulate properly.

If you have a particular range why not contact us for advice.

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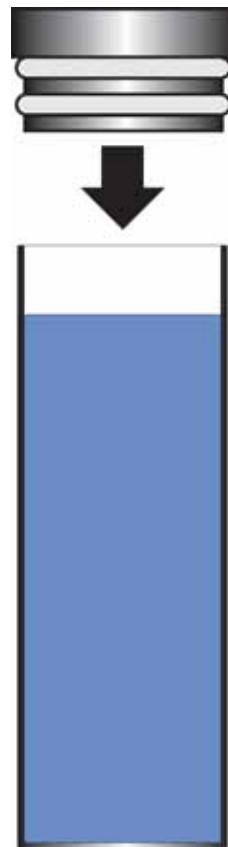
Liquid Bath Accessories



Probe Basket

Supplied as standard.

Simply place the probes in the basket.

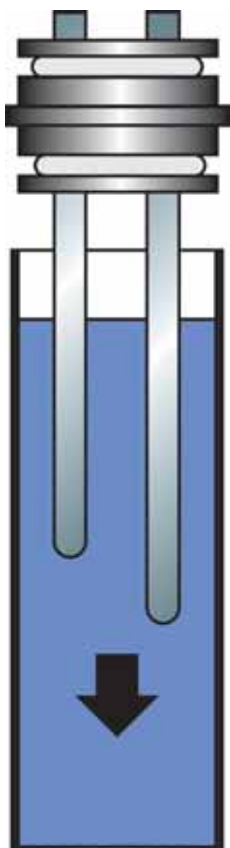


Lid

Supplied as standard.

Seals the bath and prevents spills whilst the unit is being moved.

Part Number 936-02-14



Support Kit

Optional.

Use in place of the basket to suspend up to eight probes with a diameter range of 5 - 8mm. Useful with liquid in glass thermometers as well as RTDs and TCs. Fits both directly into the block or into the optional liquid containers.

Part Number 936-06-08



Metal Insert

Optional.

A Metal Insert can be placed into the calibration volume to convert for Dry Block use. The standard block has eight 8mm pockets and two 4.5mm pockets all 157mm deep. Blank and specially drilled inserts are available.

Standard Insert Part Number 936-06-01