



Drago 934

Stirred liquid bath, dry block,
Blackbody source & Fixed Point
system, 30°C (Tamb of 20°C) to
250°C

Drago 934 is a calibration liquid bath for temperature thermometers from 30°C (in ambient of 20°C) to 250°C. It has a large calibration volume, 65 mm x 160 mm deep, which makes it ideal to use as a portable liquid bath. The stirred liquid bath is suitable for temperature sensors of all types, sizes and shapes.

Description

Drago 934 is a calibration liquid bath for temperature thermometers from 30°C (in ambient of 20°C) to 250°C. It has a large calibration volume, 65 mm x 160 mm deep, which makes it ideal to use as a portable liquid bath. The stirred liquid bath is suitable for temperature sensors of all types, sizes and shapes.

The liquid bath can provide smaller calibration uncertainties than a dry block and, when used with suitable reference thermometers, accuracies of up to 0.005°C can be achieved. The sensors can be placed directly into the stirred liquid thus avoiding the need for specially drilled blocks. Temperature homogeneity is ensured by constant liquid stirring. It is not necessary to empty the block to move the system from one place to another, a cap ensures the sealing.

In the optional dry block mode, the large 65 mm diameter block allows for the calibration of either larger probes or for calibrating many sensors simultaneously over the range 30°C to +250°C. Fully compatible with the leading I-Cal Easy automatic calibration software you can also benefit from the combination of flexibility and large calibration capacity.

Combined with accessories, it can also be converted into a Blackbody Source for infrared thermometers, a surface sensor calibrator and ITS-90 Fixed Point cell with calibration uncertainties up to 0.0005°C.

Drago is available in two models, the BASIC (B) and the SITE (S).

The B model includes a sophisticated temperature controller with a dual display for set temperature and dry block temperature.

The S model additionally includes an in-built temperature digital indicator to which an external temperature sensor can be connected. It ensures traceability, best practise and adherence to quality standards and calibration to the smallest of uncertainties.

Key features:

- Large calibration volume: 65 x 160 mm diameter
- Portable liquid bath, convertible for dry block operation
- Calibration as a liquid bath or a dry block: thermocouples, platinum resistance thermometers, thermistors, liquid in glass, thermostats, semiconductor types

Specifications

Temperature range	30°C (Tamb 20°C) to +250°C
Stability as: Dry block Blackbody Surface sensor Stirred liquid bath ITS-90 Fixed Point cells Ice bath	 $\pm 0.03^{\circ}\text{C}$ $\pm 0.3^{\circ}\text{C}$ $\pm 0.5^{\circ}\text{C}$ $\pm 0.025^{\circ}\text{C}$ $\pm 0.0005^{\circ}\text{C}$ $\pm 0.001^{\circ}\text{C}$
Accuracy as dry block	0.15°C
Uniformity: Between holes as dry block Radial as liquid bath Lower 40 mm (Axial) as dry block Lower 40 mm (Axial) as liquid bath	 $< 0.008^{\circ}\text{C}$ $< 0.007^{\circ}\text{C}$ at 250°C $< 0.04^{\circ}\text{C}$ $< 0.013^{\circ}\text{C}$ at 250°C
Heating time	30°C to 250°C: 40 min
Cooling time	250°C to 30°C: 90 min
Insert diameter	65 mm
Immersion depth	160 mm
Insert types	3 different types

General specifications

Size	302 x 176 x 262 mm
Weight	8 kg
Power supply	115 VAC or 230 VAC (50/60 Hz) 1000 Watts
Communication ports	RS 232

Models and accessories

Instrument:

Drago 934 B Liquid bath, dry block, & blackbody source – Basic model

Delivered in standard with:

- Magnetic stirrer, probe basket and lid
- Cal Notepad software
- Serial communication cable
- User manual
- Traceable certificate

Drago 934 S Liquid bath, dry block, & blackbody source – On Site model

Delivered in standard with:

- Magnetic stirrer, probe basket and lid
- Cal Notepad software
- Serial communication cable
- User manual
- Traceable certificate
- Built-in digital indicator
- Connector for probe 935-14-61/DB

Stirred liquid bath / Stirred ice / Water bath:

936-06-02 Stirred liquid container kit

936-06-08 Thermometer support kit (8 thermometers of diameter: 6 to 8 mm)

Metal block bath:

936-06-01a Standard insert of 10 holes of diameter: 8x 8 mm / 2x 4.5 mm
Depth: 157 mm

936-06-01b Blank insert

936-06-01c Non-standard insert

935-14-61/DB Semi standard platinum resistance thermometer Pt100

UKAS 5 Point comparison calibration

Blackbody source:

936-06-03 Blackbody target

Surface sensor calibrator:

936-06-04 Surface sensor calibrator kit

ITS-90 fixed point apparatus:

M 17401M Slim Gallium Melt Point cell, insulation assembly

Other accessories:

580-06-09 C20 Oil (25°C to 200°C), 0.5 L required

915/09 VHT Oil (150°C to 250°C), 0.5 L required

935-14-84 Replacement surface sensor probe

936-02-07 Replacement surface sensor insert

936-06-09 Slim TPW cell and Gallium cell holder assembly only

932-12-74 Replacement liquid container magnetic followers (Qty 5)

931-22-65 Carrying case

Packing information:

Size 302 x 176 x 262 mm

Weight without packing 8 kg