



# LTR-90

## Ultra-Cool Dry Block Calibrator



### Features and Benefits

- -95 °C to 140 °C Ultra-Cool Dry Block Calibrator
- Stirling cooler technology: reaches -90°C in 80 min; -95 °C in 90 minutes
- Temperature stability of  $\pm 0.015$  °C
- Axial Uniformity 0.05°C Full Range
- Software interface with Kaye Validator for automatic sensor calibration utility
- Custom block design to accommodate 2 reference probes (IRTD) and four inserts with three thermocouples per insert
- Rubber insulator cap to prevent frost buildup
- Ergonomics/industrial design with two-handle carry
- Conformance to Euramet/cg-13
- Weight: 16 kg (35 lbs.)

## Dual Heater Zone

Active heater zone control compensates for differential temperatures between zones, and minimizes axial temperature gradients.

## Stability Indicator

A stability indicator visually shows if the block temperature is stable and within the Stability Limits defined by the user.

When the well temperature is NOT within the Stability Limits, the indicator shows as a wavy line. When the temperature is within the Stability Limits, the indicator shows as a flat line; indicating that a measurement can be made.



Display and Control Panel



Block Design with two reference holes (IIRD) and four T/C holes (three T/C/hole).



Rubber Insulator Cap



Power and Interface Panel

# Specifications

## Temperature Range at 23°C

-95° to 140°C (-139°F to 284°F)

## Display Accuracy

±0.2°C Full Range

## Resolution

0.01°C

## Accuracy with External Reference

± 0.05 °C Full Range

## Stability

±0.015°C Full Range

## Stabilization Time

15 min.

## Axial Uniformity at 40 mm (1.6 in.)

±0.05°C Full Range

## Radial Gradient

±0.01°C Full Range

## Loading Effect (with a 6.35 mm Reference Probe and Three 6.35 mm Probes)

±0.006°C Full Range

## Loading Effect (versus Display with 6.35 mm Probes)

±0.25°C at -95°C

±0.10°C at 140°C

## Operating Conditions

0°C to 35°C

0% to 90% RH (non-condensing)

## Environmental Conditions for All Specifications (except Temperature Range)

13°C to 33°C

## Heating Time

-95°C to 140°C: 40 min.

## Cooling Time

23°C to -90°C: 80 min.

23°C to -95°C: 90 min.

140°C to 23°C: 60 min.

## Immersion (Well) Depth

160 mm (6.3 in.)

## Insertion Holes

2 reference holes (IRTD)

and 4 T/C holes (3 T/C/hole).



# Amphenol

**Advanced Sensors**

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