

Portable Temperature Calibrators

CL551 Basic Model



- ✓ NIST Traceable Standard
- ✓ Compact, Rugged and Easy To Use Multihole Dry Block Calibrators
- ✓ Built-In Reference Pt100 with 0.01°C Resolution Indicator (CL550 & CL551)
- ✓ Temperature Sensors for Field and Laboratory Inspection and Calibration
- ✓ Microprocessor Temperature Controller
- ✓ Auxiliary Inputs for External Pt100 and Thermostat Switch-Test
- ✓ Internal Fan for Rapid Cool-Down
- ✓ Ranges:
CL550: from -20 to 125°C
CL551: from T amb to 550°C
CL552: from 200 to 1100°C

General features

Controlling temperature parameters is the most important factor in assuring the quality, operational safety and reliability of industrial processes. Thermocouples, resistance thermometers and other temperature sensors, when installed in industrial processes, are subjected to mechanical, thermal and chemical stresses which accelerate their aging and eventual breakdown. Therefore, it is a recommended procedure to inspect, check and calibrate each sensor during the commissioning phase and at regularly scheduled intervals.



CL550, shown smaller than actual size.

The CL550, CL551 and CL552 series temperature calibrators are transportable units designed to provide a controlled temperature with high stability and high uniformity in all calibrator ranges.

All units in this series come equipped with a permanent six hole block. Please see specifications for further details.

Internal Metal Block Temperature Stability

A built in microprocessor-based controller handles the man-machine interface, the internal logic, and assures the high stability of the internal metal block through a sophisticated temperature algorithm.

External Digital Indicator

When better accuracy is required, the CL550 or CL551 temperature calibrator can be combined with an external high accuracy indicator (such as a CL526) and a Working Standard Thermometer.

Digital Interface

The CL550, CL551 and CL552 series temperature calibrators are equipped with a full bi-directional RS-232 digital interface for communication with personal computers.

The temperature calibrator can be part of an automatic calibration system with a programmable cycle and the acquisition of data required to generate a full Calibration Report.

| Specifications | CL550 | CL551 | CL552 |
|---|--|---|--|
| Range | -20 to 125°C (-4 to 257°F) ^{1,2} | T amb to 550°C (1022°F) ² | 200 to 1100°C (392 to 2012°F) ² |
| Stability | ±0.03°C | ±0.05°C @ 450°C | ±0.3°C at 1000°C |
| Reading Accuracy | ±0.15°C @ 100°C | ±0.3°C @ 450°C | ±(0.2% fs + 1 digit) |
| Uniformity: Radial Axial | ±0.1°C @ 100°C ±0.2°C @ 80 mm | ±0.2°C @ 450°C ±0.8°C @ 80 mm | ±0.2°C @ 800 °C ±0.3°C @ 100 mm |
| Heating Rate | 15°C/minute | 20°C/minute | 17°C/minute |
| Cooling Rate | 12°C/minute | 10-25°C/minute | 6°C/minute |
| Stabilizing Time | 6 min. | 10 min. | 20 min |
| Standard Block Immersion Depth No. of Holes | Aluminum 5.3" 6 | Aluminum 7.3" 6 | Inconel 600 7.3" 6 |
| Diameter(s) | 1/8", 3/16", 1/4", 5/16", 3/8", 3/4" | 1/8", 3/16", 1/4", 5/16", 3/8", 3/4" | 1/8", 3/16", 1/4", 5/16", 3/8", 3/4" |
| Regulating System | PID microprocessor | PID microprocessor | PID microprocessor |
| Reference Sensor | Pt100 - Class A | Pt100 - Class A | Thermocouple type N |
| Auxiliary Input | 3 wires Pt100 | 3 wires Pt100 | |
| Display | 2 lines of 20 characters on backlighted LCD | 2 lines of 20 characters on backlighted LCD | LED display 2 lines of 4 digits |
| Display Resolution | 0.1 and 0.01°C | 0.1 and 0.01°C | 1°C |
| Digital Interface | RS 232 | RS 232 | RS 232 |
| Power Supply | 110 V optional 220 V | 110 V optional 220 V | 110 V optional 220 V |
| Power | 300 VA | 800 VA | 1200 VA |
| Chassis | Separate shells for thermal & electronic sections with a carrying handle | Separate shells for thermal & electronic sections with a carrying handle | Separate shells for thermal & electronic sections with a carrying handle |
| Dimensions | 140 x 370 x 300 mm (5.5 x 14.6 x 11.8") | 140 x 370 x 300 mm (5.5 x 14.6 x 11.8") | 200 x 330 x 420 mm (7.9 x 13.0 x 16.5") |
| Weight: Net Gross | 10 kg (22 lb) 17 kg (37.4 lb) | 10 kg (22 lb) 17 kg (37.4 lb) | 12 kg (26.4 lb) 17 kg (37.4 lb) |
| Standard Accessories | Insert extractor, Fuse kit Thermostat leads kit, Electric power cable, Insert reducing block with Ø 4.5-6.5-9.5 mm holes | Insert extractor, Fuse kit, Thermostat leads kit, Electric power cable | Insert extractor, Fuse kit, Electric power cable, Insert reducing block with Ø 7-9-11-13.5 x 175 mm holes |

¹ Measure referred at 18°C ambient temperature.

² The relative accuracies and stability shown are referred at 20°C ±3°C ambient temperature.

ALL MODELS AVAILABLE FOR FAST DELIVERY!

| To Order (Specify Model Number) | | |
|---------------------------------|--|---|
| Model No. | | Description |
| CL550 | | Portable block calibrator 302°F with a permanent multi-hole insert (1/8", 3/16", 1/4", 5/16", 3/8", 3/4" dia x 5.3" long insert) |
| CL551 | | Portable block calibrator 1022°F with a permanent multi-hole insert (1/8", 3/16", 1/4", 5/16", 3/8", 3/4" dia x 7.3" long insert) |
| CL552 | | Portable block calibrator 2012°F with a permanent multi-hole insert (1/8", 3/16", 1/4", 5/16", 3/8", 3/4" dia x 7.3" long insert) |

Each unit comes complete with: operator's manual, power cord, fuse and calibration certificate (NIST traceable). Add "-220V" to model number for 220 Volt power. No additional charge.

Ordering Example: CL550 portable block calibrator 110 V with multi-hole insert.

OCW-3 OMEGACARESM extends standard 1-year warranty to a total of 4 years.



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor and equivalent loaners.

Accessories

| Model Number | Description |
|--------------|---|
| CL5-CASE | Aluminum carrying case |
| MA-1201 | Reference Book: Alternative Methods of Regression |

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