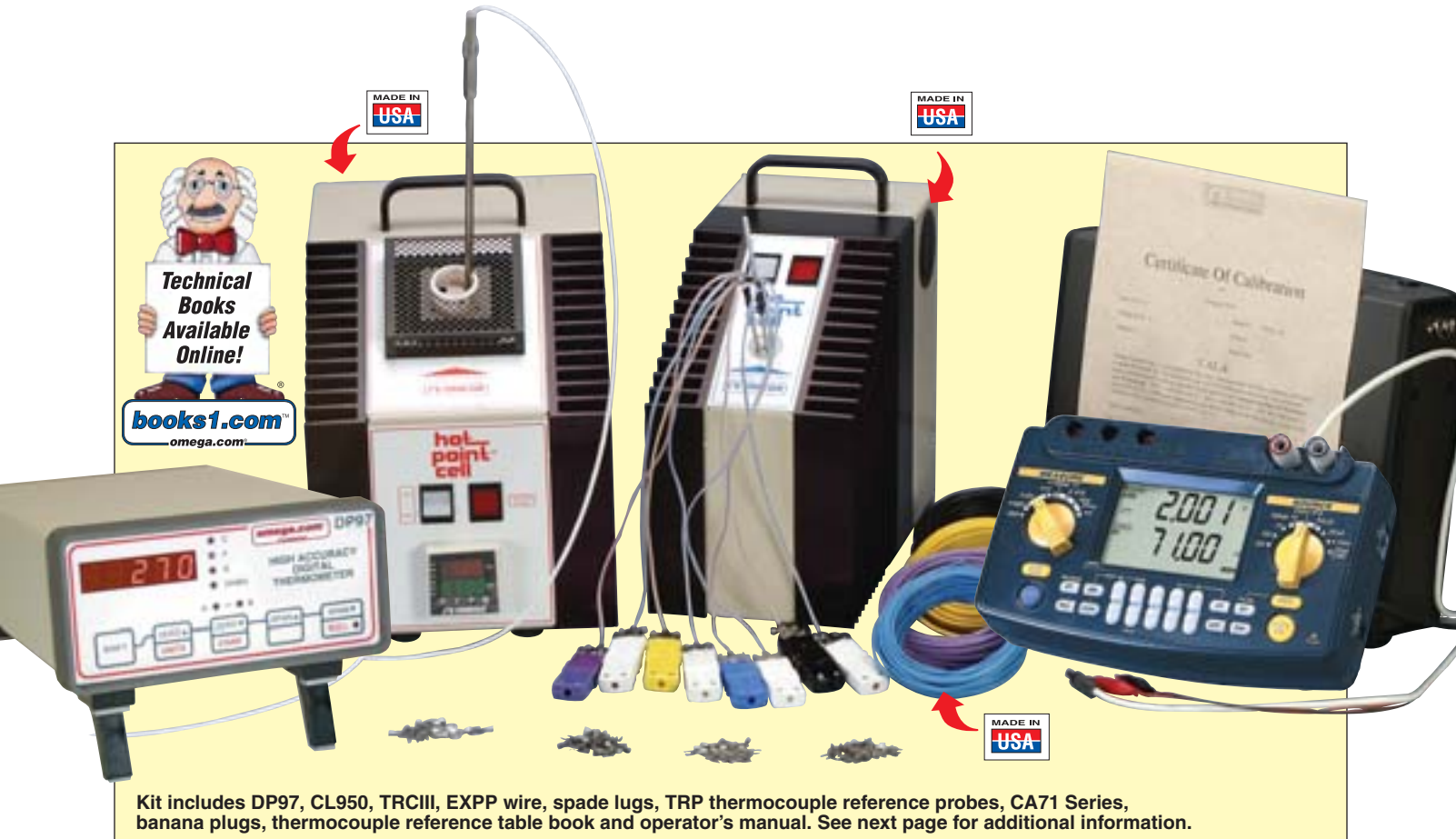


# Thermocouple/RTD Probe Calibration Kit



Kit includes DP97, CL950, TRCIII, EXPP wire, spade lugs, TRP thermocouple reference probes, CA71 Series, banana plugs, thermocouple reference table book and operator's manual. See next page for additional information.

TPCK-1D  
**\$8740**



- ✓ System Accuracy Better Than 1°C (1.8°F)
- ✓ Includes ice point™ and hot point® References, DMM, Voltage Standard, Reference Thermometer, and Accessories
- ✓ Thermocouple Probe Calibrations Up to 482°C (900°F)
- ✓ Reference Probes Included for J, K, T, E Thermocouples

Please Note: Not all components of the TPCK-1D are made in the U.S.A.



The TRCIII ice point™, reference probes, wire and connectors are made in the U.S.A.

The TPCK-1D kit constitutes a complete calibration system for any thermocouple element up to 482°C (900°F). It comes with everything needed to calibrate probes. Included with each kit is an NIST-traceable RTD probe, high-precision digital RTD thermometer with 0.001°C resolution, 5-digit precision multimeter, hot point® dry block calibrator, TRCIII ice point™ reference chamber, glass thermometer, thermocouple reference probe assemblies, thermocouple millivolt vs. temperature reference tables, thermocouple lead wire, and copper jumper jack. Used in calibration or metrology laboratories, the TPCK Series is a practical solution for a user's calibration needs.

The hot point® calibrator allows quick and easy calibration of thermocouple and RTD probes.

An integral RTD sensor ensures high measurement accuracy and repeatability. With the built-in PID controller, exceptional stability of ±0.2°C (0.36°F) or better is attained at temperatures up to 482°C (900°F). The stabilizing block features two ¼" diameter wells and one each of ⅜, ½, and ⅝" diameter 6" deep wells. By placing the standard probe (supplied with the TPCK kit) in the well next to the probe under calibration, the user can make a temperature comparison.

The TRCIII ice point™ calibrator reference point cell relies on an equilibrium of ice and distilled, de-ionized water at atmospheric pressure to maintain 6 reference wells at precisely 0°C (32°F). The wells extend into a sealed cylindrical chamber containing the distilled, de-ionized water whose walls are cooled by thermoelectric elements. The reference wells are

maintained at 0°C (32°F) to within ±0.1°C (0.18°F) or better and a stability of ±0.04°C (0.072°F) for constant ambient. The TPCK-1D comes with a set that locates the thermocouple-copper transition reference junction at the end of an 1/8" diameter sheath for easy insertion into the TRCIII ice point<sup>™</sup> calibration chamber.

**NEW MODELS!**  
New models are available. See page K-13 for the TRCIII-A ice point<sup>™</sup> and page K-24 for the CL950A hot point<sup>®</sup>.

**System Specifications**

**Accuracy:** Better than ±1°C (±1.8°F) @ 25°C (77°F)  
**Thermocouple Types:** J, K, T, E, R, S, B, G, C, D  
**Power:** 115 Vac, 60 Hz  
**Environmental Ambient:** 4 to 32°C (40 to 90°F)

**TRCIII ice point<sup>™</sup> SPECIFICATIONS**

**Accuracy:** ±0.1°C (±0.18°F) or better  
**Stability:** ±0.04°C (±0.072°F) for constant ambient  
**Reference Wells:** 6 wells, 5/32" ID, 3, 3/4" deep; wells are thermally and electrically grounded to each other

**hot point<sup>®</sup> (CL950-110) SPECIFICATIONS**

**Temperature Range:** 22°C (40°F) above ambient to 482°C (900°F)  
**Accuracy:** ±0.8°C (±1.44°F) or better  
**Stability:** ±0.2°C (±0.36°F) or better  
**Reference Wells:** 5 wells: two 1/4" diameter, and one each 3/16, 1/8, 1/16" diameter; 6" deep

**DP97 SPECIFICATIONS**

**Temperature Range:** -199 to 849°C (-328 to 1472°F), depending on traceable RTD probe range  
**Accuracy:** ±0.02°C (±0.036°F) ±1 digit for range of -200 to 500°C (-328 to 932°F)  
**Resolution:** 0.01°C or 0.001°C, user selectable in A, B and A—B modes  
**Stability:** 0.0025°C/°C (0.0045°F/°F) ambient change  
**Linearization:** ±0.01°C (±0.018°F)



CA71-NIST, compact, multifunction calibrator, \$1700. See page K-71.



TRCIII ice point<sup>™</sup> reference chamber, \$1175. See page K-15.

CL950-110, dry block calibrator, \$3395. See page K-25.

**PATENTED**

Covered by U.S. and International patents and pending applications



**AVAILABLE FOR FAST DELIVERY!**

| To Order (Specify Model Number) |        |                                   |
|---------------------------------|--------|-----------------------------------|
| Model No.                       | Price  | Description                       |
| TPCK-1D                         | \$8740 | Calibration kit, thermocouple/RTD |

Ordering Example: TPCK-1D, calibration kit, \$8740.

**Optional TRP Reference Probes**

| Model No. | Price | Thermocouple Types |
|-----------|-------|--------------------|
| TRP-(*)   | \$130 | R, S, B, G, C or D |

\* Insert calibration type R, S, B, G, C or D  
Probes featured on page A-40.

**Please Note:** Features and specifications on the individual products in this kit can also be found by model number online at [omega.com](http://omega.com).

**TPCK Kits Include**

- ✓ **CL950-110**, Dry block calibrator, see page K-25
- ✓ **DP97**, Precision RTD thermometer, see page K-77
- ✓ **DP97-PROBE1**, Precision RTD probe, see page K-77
- ✓ **TRCIII**, ice point<sup>™</sup> Reference chamber, see page K-15
- ✓ **CA71-NIST**, Precision Source/DMM, see page K-71
- ✓ **TRP-J, TRP-K, TRP-T, TRP-E**, T/C reference probes, see page A-37
- ✓ **GT-3404RL-CC**, Glass thermometer, see page E-4
- ✓ **EXPP-(\*)-20-25**, Four 7.6 m (25') spools, one each of J, K, T, and E thermocouple wire, see page H-32
- ✓ **Banana Plug**, 46 cm (18") copper wire with banana plugs, see page Q-56
- ✓ **SL(\*\*)-20**, Compensated spade lugs, see page G-52
- ✓ **Thermocouple Reference Table Book**, (Thermocouple mV vs. temperature tables), see page Z-201
- ✓ **Instruction Manuals**, included with all products.

\*J, K, T or E, one spool of each included with kit.  
\*\*CH=CHROME<sup>®</sup>, AL=ALOMEGA<sup>®</sup>, IR=iron, CO=constantan, CP=copper, one package of 20 lugs for each alloy included with kit.



DP97, high-accuracy digital thermometer, \$1900. See page K-77.



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