

MicroCal T100 MicroCal T500 MicroCal T1100



Innovative Instrumentation Solutions
A unit of E instruments Group LLC

Dry Block Temperature Calibrators Portable "Dry Block" Furnaces

- ▶ **Reliable, Rugged and Stable**
- ▶ **Ranges from -58°F to +2000°F**
- ▶ **Resolution 0.01°F**
- ▶ **Two High Accuracy Input Channels (3/4 Wires Pt100 and TCs)**
- ▶ **RS232 Serial Interface**
- ▶ **Temperature Switch Input**

CalpMan 2004 and **CalpMan Plus** software for automatic calibration and documenting in compliance with ISO9001.



All descriptions are related to a fully optioned instrument. See last page for the different configurations.

The temperature parameter represents the most important factor to fulfill quality, operational safety and reliability of industrial processes. Thermocouples, RTDs and any other temperature sensors, when installed in an industrial process, they are subjected to mechanical, thermal and chemical stresses which accelerate their aging. Therefore it is a recommended procedure to inspect, check and calibrate each sensor during the commissioning phase and at regular and programmed time intervals.

The MicroCal T temperature calibrator series are designed to verify and calibrate temperature sensors and process transmitters both in laboratory and on-site applications.

The **MicroCal T100** calibrator can generate temperature from -58°F from ambient temperature to +300°F.

The **MicroCal T500** calibrator can generate temperature from ambient temperature to +1020°C (1110°F in high temperature version).

The **MicroCal T1100** calibrator can generate temperature from +390°F to +2010°F.

MicroCal T100/T500/T1100

Temperature Calibrators

Specifications

	MicroCal T100	MicroCal T500	MicroCal T1100
Temperature Range	-58 Tamb. to 300°F	Tamb. to 1020°F up to 1110°F opt.	+390°F to +2010°F
Stability	±0.6°F	±0.11°F	±0.6°F
Radial Uniformity	0.2°F@212°F	0.4°F@842°F	0.8°F
Axial Uniformity	0.4°F@3.1"	16°F@3.1"	0.4°C@3.9"
Resolution	0.01 / 0.1°F	0.01 / 0.1°F	0.01 / 0.1°F
Reading Accuracy	±0.3°F	±0.6°F	±0.3% rdg
Regulation	Pt100 4fili	Pt100 4fili	Tc S
Units	°C / °F	°C / °F	°C / °F
Test wells	φ0.26"-1"	φ0.18"-0.26"-0.37"-0.67"	φ1.73"
Standard insert	φ0.18"-0.26"-0.37"	--	φ0.28"-0.35"-0.43"-0.53"
Wells depth	5.3"	7.3"	6.1"
Serial interface	RS232	RS232	RS232
Heating time (MAX)	40°F / min	40°F / min	36°F / min
Cooling time (MAX)	50°F / min	50°F / min	12°F / min
Dimensions	6.3"x13.4"x13"		6.7"x13"x17.7"
Weight (net)	10Kg/22lbs	10Kg/22lbs	12Kg/27lbs

* On request φ1.4" test well and φ0.16"-0.18"-0.22"-0.26"-0.33"-0.41" insert wells (min. temp. -54°F from Tamb).

** On request φ1.6" test well.

Auxiliary TCs & Pt100 inputs

You can connect the working standard and the test probe (Pt100 3/4 wires; thermocouples J, K, N, R, S) for the complete calibration system. The optional internal data acquisition board has gold contact bining posts and automatic cold joint compensation.

Input	Range	Accuracy
Pt 100 IEC 3, 4 wires	-148 to +1290°F	±0.6°F
Thermocouple J	32 to 1830°F	±2°F
Thermocouples K, N, R, S	32 to 2370°F	±2°F

Ordering Code

MicroCal T100 8172 - A - B - C MicroCal T500 8174 - A - B - C

MicroCal T100 Standard package includes: standard insert, extraction tool, user manual, E Instruments calibration certificate.

MicroCal T500 Standard package includes: user manual, E Instruments calibration certificate.

Table A

Options

- 0 None
- 1 Aluminium carrying case (EE880063)
- 2 Extended temperature range to 1110°F (MicroCal T500 only)
- 3 Two channels TCs & Pt100 auxiliary input
- 4 Vinyl carrying case (BB880047)
- 9 Special drilling insert

Table B

Power Supply

- 1 120 Vac with USA plug
- 2 230 Vac with Schuko plug
- 3 240 Vac with UK plug
- 4 230 Vac with European plug
- 5 100 Vac with Japan/USA plug

Table C

Calibration Certificate

- 1 E Instruments certificate

MicroCal T100 inserts φ1":

- cat. EE460010 without drillings
- cat. EE460011 (1 / 0.57")
- cat. EE460012 (1 / 0.69")
- cat. EE460013 (2 / 0.26"-0.49")
- cat. EE460014 (3 / 0.26")
- cat. EE460015 (3 / 0.18"-0.26"-0.37")

MicroCal T500 inserts φ0.67":

- cat. EE460016 without drillings
- cat. EE460017 (1 / 0.37")
- cat. EE460018 (1 / 0.31")
- cat. EE460019 (1 / 0.39")
- cat. EE460020 (1 / 0.43")
- cat. EE460021 (1 / 0.47")

MicroCal T1100 8176 - A - B - C

Standard package includes: extraction tool, no.4 holes insert, ceramic no.4 holes insulator, user manual, E Instruments calibration certificate.

Table A

Options

- 0 None
- 1 Aluminium carrying case (EE880064)
- 2 Two channels TCs & Pt100 auxiliary input
- 4 Vinyl carrying case (BB880047)
- 9 Special drilling insert

Table B

Power Supply

- 1 120 Vac with USA plug
- 2 230 Vac with Schuko plug
- 3 240 Vac with UK plug
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Calibration Certificate

- 1 E Instruments Certificate

Calibration Procedure Manager Your Software for Documenting

Standard Agencies and Quality Auditors require, to keep the compliance with ISO 9000, collection, organization and analysis of traceable documents. E Instruments can offer you two different Windows® based softwares.

CalpMan 2004 Software

This supporting software, is able to transfer a selection of calibration routines from a PC to the internal memory of the instrument in order to simplify field calibrations selecting the required TAG number. CalpMan 2004 grants the option to document the calibration/inspection activities.

CalpMan Plus Software

This software is designed for multiple temperature sensors cerification. You can connect up to 16 TCs or 8 RTDs and certify them simultaneously. An analog multiplexer (scanner) have to be used together the MicroCal T temperature calibrator.

BB700001 RS232 serial communication cable

