

### Dry block temperature calibrator **LR-Cal SOLAR** and **LR-Cal SOLAR-1200**

- Temperature range: +200...+1100°C or +200...+1200°C
- For mobile and stationary use
- Microprocessor operated
- Ramp function, thermostat tests



### Typical Applications:

- Calibration and checking of all kinds of thermometer
- Calibration and checking of thermostats
- Computer aided calibration via computer interface

Model:	LR-Cal SOLAR	LR-Cal SOLAR-1200
Temperature range at +20°C ambient temperature:	+200°C...+1100°C	+200°C...+1200°C
Accuracy of built-in temperature indication:	±3°C	±3°C
Display resolution (user-selectable):	0.01° / 0.1°	0.1°C
Temperature units (user-selectable):	°C / °F / K	°C / °F / K
Stability of regulated temperature (at 1000°C):	±0.3°C	±0.3°C
Heating time:	∅ 18°C per minute	∅ 15°C per minute
Cooling time:	∅ 6°C per minute	∅ 7°C per minute
Radial temperature conformity (at 1000°C):	±0.4°C (at 40 mm depth)	±2°C (at 40 mm depth)
Axial temperature uniformity:	±3°C	±3°C
Block depth:	220 mm (1)	160 mm (1)
Block diameter:	44 mm	35 mm
Display:	LCD 2 lines	LCD 2 lines
Interface:	RS232 (Option: with USB converter)	RS232 (Option: with USB converter)
Inputs for 2 external probes:	Option (version -2I) (2)	-
Ramp function (fully programmable):	•	-
Thermostat test function and connection:	• (3)	-
Power supply (50/60 Hz):	230 VAC (4)	230 VAC
Power consumption:	850 VA	700 VA
Weight:	12 kg	10.5 kg
Metal housing dimensions:	450 x 170 x 330	350 x 160 x 390

(1) including upper insulation

(2) e.g. 1 x for external reference + 1 x for probe under test (Pt 100 or TC)

(3) with automatic log of switch open and switch close

(4) optional for 115 VAC

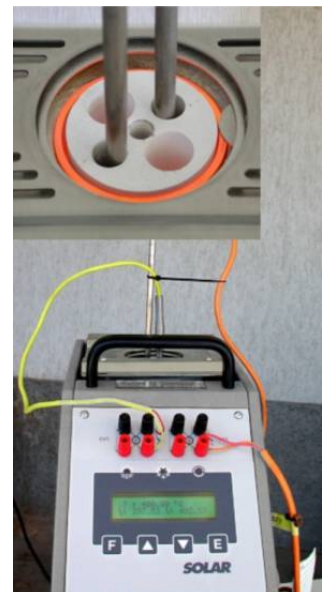
### Scopy of standard delivery:

- Temperature calibrator **LR-Cal SOLAR** or **LR-Cal SOLAR-2I** or **LR-Cal SOLAR-1200**
- Mains power cable
- Ceramic block with 4 holes, including suitable upper insulation:  
**LR-Cal SOLAR (-2I):** 7 - 9 - 11 - 13.5 mm; **LR-Cal SOLAR-1200:** 4.8 - 6.4 - 9.5 - 12.8 mm
- Tool for removing block insert
- Spare fuses
- Connection cable for thermostat tests (not at model **LR-Cal SOLAR-1200**)
- Operating manual and factory certificate (accuracy, performance, stability)

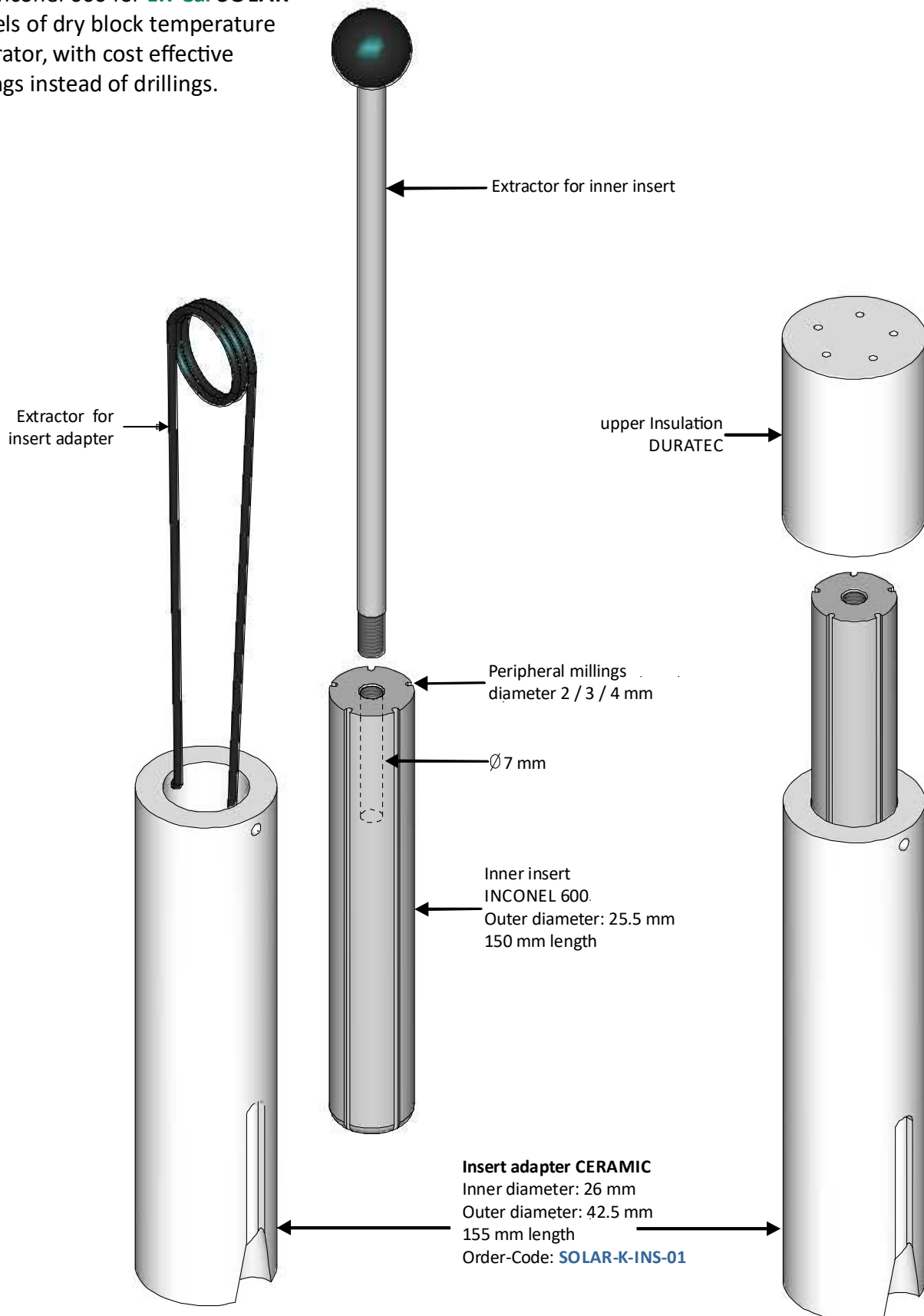
### Only at version **LR-Cal SOLAR-2I:**

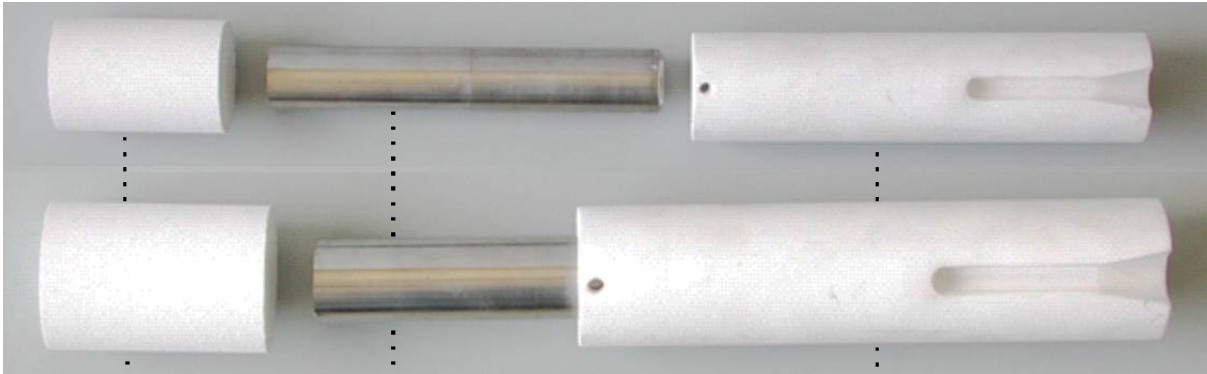
- Set of test cables and plugs (red/black)

With data acquisition card and two input devices to measure resistance thermometer probes and thermocouples. Details - see page 3. **Order-Code: 511.0.111.1100.0**



Multi-part insert made in ceramic and Inconel 600 for **LR-Cal SOLAR** models of dry block temperature calibrator, with cost effective millings instead of drillings.





Insulation  
DURATEC

Insert  
INCONEL 600

Insert adapter CERAMICS  
 Order-Code: [SOLAR-K-INS-0](#)

Basically, the inner inserts made in inconel can be supplied with millings between 2 and 6 mm diameter or drillings between 7 and 18 mm diameter (total number of possible drillings or millings are depending on their diameter).

**Block inserts for models LR-Cal SOLAR and LR-Cal SOLAR-1200:**

We offer you a wide range of options for testing and calibrating test items (thermometers, thermostats, sensors, resistanc thermometers, thermocouples of all kinds) as effectively as possible with the metal dry block temperature calibrator.

- Ceramic or Inconel 600 block
- Inserts, adapter inserts and insulating covers with holes and cut-outs with various dimensions and diameters to suit your requirements
- Black body insert for testing infrared thermometers

Please let us know your requirements with all details of your test specimens, we will be pleased to submit our delivery proposal to you.

**Further optional Accessories:**

- Robust aluminium case 400 x 300 x 500 mm with foam insert
- **LR-Cal AQ2Sp** software for Windows-PC  
 The calibrator can operate in automatic mode connected to a PC by means of this optional software, which enables to carry out probe calibrations and cyclical life testes. Test results can be stored and printed, so they are easily traceable in compliance with ISO 9000 standards.
- External reference probe thermocouple type S, incl. certificate of calibration
- RS232 - USB interface converter

**Version LR-Cal SOLAR-2I:**

Instrument version with 2 measuring inputs, both suitable for resistance thermometers Pt 100 (2-, 3- or 4-wire) or Pt 100 as well as thermocouples (incl. cold junction compensation) types B, E, J, K, N, R, S and T. The signals of up to two external temperature sensors can be displayed additionally.



Accuracy (max. deviation) of the optional measuring inputs at version "-2I":

Resistance thermometer:			
<b>Pt 100 + PT 1000</b>	at -40°C:	<b>±0.09°C</b>	at 0°C: <b>±0.08°C</b>
	at +300°C:	<b>±0.14°C</b>	at +450°C: <b>±0,30°C</b>
			at +150°C: <b>±0.11°C</b>
			at +600°C: <b>±0,40°C</b>
Thermocouples:			
<b>Type B</b>	at +950°C:	<b>±0.97°C</b>	at 1050°C: <b>±1.03°C</b>
<b>Type E</b>	at -40°C:	<b>±0.42°C</b>	at 0°C: <b>±0.40°C</b>
<b>Type J</b>	at +200°C:	<b>±0.52°C</b>	at +450°C: <b>±0.67°C</b>
<b>Types K + N + R + S</b>	at +400°C:	<b>±0.64°C</b>	at +700°C: <b>±0.82°C</b>
<b>Type T</b>	at -40°C:	<b>±0.42°C</b>	at 0°C: <b>±0.40°C</b>
			at +350°C: <b>±0.61°C</b>
			at +700°C: <b>±0.82°C</b>
			at +1000°C: <b>±1.00°C</b>