# Portable dry block and micro-bath

## TE-25NL
-25...+155 ºC

## TE-35NL
-35...+155 ºC

## TE-45NL
-45...+155 ºC

- Multifonction 4 in 1 (dry block, micro-bath, black body and surface)
- Inputs for measuring Device Under Test
- Portable and optimized for onsite calibration
- Best value for money




- Resolution of 0.01 °C
- Stability ± 0.02 °C
- Input for RTD, thermocouples and thermostats, etc...
- Internal regulated 24 Vdc power supply and 4-20mA input for 2-wire transmitters
- Complete automatic calibration with or without the use of the a computer (auto-cycling)
- Documenting capabilities: connection with computer and ISOPLAN® calibration software
- Remote Control via Bluetooth and Android application




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PRESYS®

## Performance without compromise

The TE-25NL / TE-35NL / TE-45NL temperature calibrators give you the best in portable metrology with an optimal value for money. Indeed, these dry blocks/microbath temperature calibrators have cK (centikelvin) characteristics associated with functionalities only available on top range models of competition.

## 4 in 1 multifunction

The TE-xxNL incorporates all the functions of a standard dry block, but also those of a silicone oil bath with magnetic stirrer, a black body for the calibration of infrared pyrometers as well as those of a surface sensor calibrator. In addition, it has a measurement input used to read and record measurements from RTD such as PT100 or PT1000 probes, thermocouples, electrical signals 4-20mA, mV etc ... The user will be able to carry out temperature cycles automatically without need of signal reader, without a PC and without having to make manual readings at each temperature step.

## Economical and flexible

The TE-xxNL, although true multifunction calibrators, remain modular. Indeed, the user can opt for the dry block alone and benefit from a large 35mm diameter/160mm deep well. Subsequently, the metrologist can gradually add the insert for liquid bath calibrations or the black body for calibrating non-contact thermometers (pyrometer type) or well again a flat insert for the calibration of the surface temperature sensor.

## Robust and designed for the field

Robust and light, the calibrators of the TE-NL series are equipped with multi-stage Peltier modules which, in addition to the possibility of reaching negative temperatures, allow fast and stable regulation. Compact in size, they will be the allies of metrology technicians in laboratories, as well as in the field, even in the most harsh indutrial environments.

## Presys High-Performance Controller / Calibrator




Internal Reference Probe

Set Point

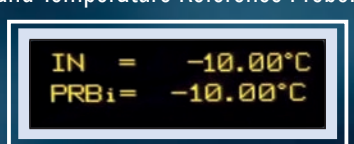
Current Input

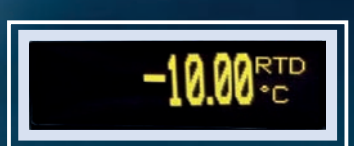
Thermocouple Input

Transmitter Power Supply 24 Vdc

RTD Input 2, 3, 4 wires

Simultaneous Display of DUT Input and Temperature Reference Probe.



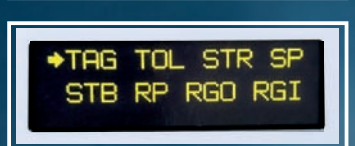




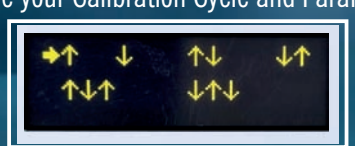
Selection of Various Display Options.

Embedded Complete Calibrator with Documented Capabilities

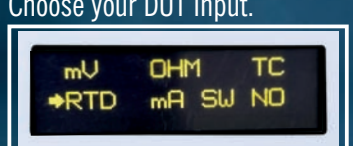


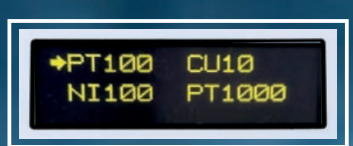




Define your Calibration Cycle and Parameters.

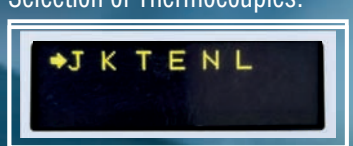



Choose your DUT Input.




Selection of Thermocouples.




Runs Automatically the Calibration Cycle and Stores the Values.

# Common Features of our TE Economic Series

- Display - OLED.
- Electric Power Supply: 115 or 230 Vac, 50/60 Hz.
- Unit/Temperature Scales: ºC, ºF, IPTS-68 or ITS-90, user selectable.
- Serial Communication: Modbus® RTU Protocol (RS-232/RS-485) and Bluetooth.
- Input Thermocouple: J, K,T, N, L: ± 0.2 ºC @ 660 ºC / E: ± 0.1 ºC @ 660 ºC.
- CJC Accuracy: ± 0.2 ºC.
- Input RTD: 2, 3, 4 Wires / Pt-100, Pt-1000, Cu-10, Ni-100 / ± 0.1 ºC.
- Input Current: -1 to 24.5 mA, ± 0.02% FS.
- Transmitter Power Supply: 24 Vdc regulated.



## Models

| | TE-25NL | TE-35NL | TE-45NL |
|---|---|---|---|
| **Operating Range** ambient temperature: 23 °C | -25 °C to +155 °C | -35 °C to +155 °C | -45 °C to +155 °C |
| **Accuracy with internal Reference:** | ± 0.1 °C | ± 0.1 °C | ± 0.10 °C |
| **Resolution:** | 0.01 °C | 0.01 °C | 0.01 °C |
| **Stability:** | ± 0.02 °C | ± 0.02 °C | ± 0.025 °C |
| **Axial Uniformity (40 mm) Dry Block:** | ± 0.06 °C | ± 0.08 °C | ± 0.08 °C |
| **Radial Uniformity Dry Block:** | ± 0.02 °C | ± 0.025 °C | ± 0.025 °C |
| **Axial Uniformity (40 mm) Stirred Liquid:** | ± 0.025 °C | ± 0.025 °C | ± 0.025 °C |
| **Radial Uniformity Stirred Liquid:** | ± 0.02 °C | ± 0.02 °C | ± 0.02 °C |
| **Heating Time:** | 25 min (25 °C to 140 °C) | 20 min (25 °C to 140 °C) | 20 min (25 °C to 140 °C) |
| **Cooling Time:** | 20 min (25 °C to -25 °C) | 40 min (25 °C to -35 °C) | 40 min (25 °C to -45 °C) |
| **Peltier module multi-stage:** | 4 x 2 | 4 x 2 | 6 x 2 |
| **Electric Power:** | 300 W | 450 W | 450 W |
| **Power Supply:** | 115 - 230 Vac, 50/60 Hz | 115 - 230 Vac, 50/60 Hz | 115 - 230 Vac, 50/60 Hz |
| **Well Diameter x Depth:** | Ø 35 mm x 160 mm | Ø 35 mm x 160 mm | Ø 35 mm x 160 mm |
| **Weight:** | 12.0 kg | 12.5 kg | 12.5 kg |
| **Dimension (HxWxD):** | 315 x 180 x 270 mm | 315 x 180 x 270 mm | 315 x 180 x 270 mm |

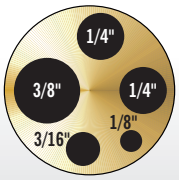


## Inserts

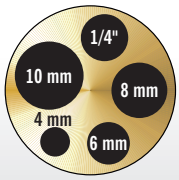
**IN1P**



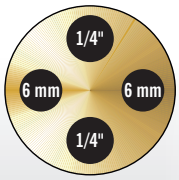

**IN1A**




**IN1E**




**IN06**




- One standard insert included (default is IN1P).
- Consult our website or factory for all insert dimensions and types available.
- Presys can provide custom inserts with minimum 3mm separation between holes, consult Presys with your specific requirements

## Inserts

| Models | Holes | Order Code |
|---|---|---|
| **IN01** | 1x 3/4" | 06.04.0041-00 |
| **IN02** | 1x 1/2" | 06.04.0042-00 |
| **IN03** | 1x 6.0 mm et 3x 1/4" | 06.04.0043-00 |
| **IN04** | 3x 6.0 mm et 1x 1/4" | 06.04.0044-00 |
| **IN05** | 4x 6.0 mm | 06.04.0045-00 |
| **IN06** | 2x 6.0 mm et 2x 1/4" | 06.04.0046-00 |
| **IN07** | 1x 6.0 mm 1x 8.0 mm et 1x 3/8" | 06.04.0047-00 |
| **IN08** | 1x 6.0 mm 1x 3.0 mm et 2x 1/4" | 06.04.0048-00 |
| **IN09** | Without hole, to be drilled by the client | 06.04.0049-00 |
| **IN10** | Others, under ordering | 06.04.0050-00 |
| **IN1P** | 1 x 3mm, 1 x 6mm, 1 x 8mm, 1 x 1/4" | 06.04.0125-00 |
| **IN1A** | 1 x 1/8", 1 x 3/16", 2 x 1/4", 1 x 3/8" | 06.04.0126-00 |
| **IN1E** | 1 x 4mm, 1 x 6mm, 1 x 1/4", 1 x 8mm, 1 x 10mm | 06.04.0127-00 |

## Order Code

**TE-25NL / TE-35NL / TE-45NL - ☐ IN - ☐☐ - ☐☐**

**Power Supply**
1 - 115 Vac 2 - 230 Vac

**Included Insert**
Choose from those listed above.

**Optional**
AG - Stirred Liquid Kit
BB - Black Body Insert
SS - Insert for superfice






## Included Items:

- Insert (selectable), insert extractor tool, test leads, power cord, manual, calibration certificate and Bluetooth interface.

## Optional Accessories:

- Soft Carrying Case - Order Code: 06.01.0006-00
- Communication Interface - Order Code: 06.02.0002-00

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On the other hand, PRESYS has selected after-sales service partners for the repair and calibration of your equipment. under warranty or not..

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