
Dry Block for Temperature Calibration



T-25N, T-350P and T-650P Dry Block Calibrators perform functions that would require three different types of instruments: dry block, standard thermometer and calibrator for TCs, RTDs, mA, mV, ohms and thermostats.

- T-25N model generates temperatures from -25°C to $+125^{\circ}\text{C}$ (-49°F to $+257^{\circ}\text{F}$), T-350P and T-650P models generate from room temperature to 350°C (662°F) and 650°C (1202°F).
- Accuracy up to $\pm 0.1^{\circ}\text{C}$ with internal reference or $\pm 0.05^{\circ}\text{C}$ with external thermometer, such as PRESYS Super Thermometer ST-501.
- Resolution of 0.01°C .
- Stability of $\pm 0.02^{\circ}\text{C}$ for T-25N, $\pm 0.05^{\circ}\text{C}$ for T-350P and T-650P.
- Present input for thermocouples, thermoresistances and thermostats. Besides generating temperature, they measure the signal from the sensor to be calibrated. Perform TC readings with high precision internal cold junction compensation.
- Internal regulated 24VDC power supply and mA input for 2-wire transmitters.
- Make no use of external standard thermometers.
- Accomplish completely automatic calibrations with or without the use of a computer.
- Documenting capabilities: communication with computer and CS-504 Calibration Software.
- Portable, compact, provide interchangeable inserts and carrying case.

T-25N, T-350P and T-650P models control temperature over an insert in order to calibrate thermocouples, thermoresistances, glass thermometers, thermostats, etc. Besides providing high accuracy temperature values, they also allow the measurement of signals generated by the thermocouples, thermoresistances and thermostats, which are being calibrated. This is possible, due to an embedded calibrator specific for these types of signal, including 4 - 20mA. They incorporate the functions of dry block, standard thermometer and calibrator for RTD and TC sensors, besides mA reading.

They present a wide variety of programming resources, allowing them to perform automatic calibrations of thermocouples, thermoresistances and thermostats. In this case, the sensor is placed in the insert and its electric terminals are connected to the embedded calibrator, the operator defines the calibration points and their number of repetitions, then the process is started so that all the sequence is automatically accomplished. Another way of performing automatic documented calibrations is by means of CS-504 Calibration Software for PC/Windows*, which uses RS-232 serial port to connect PC to the dry block. With CS-504 it is possible to register sensors and instruments of the factory, generate work orders, create and print calibration certificates and reports, that is, it brings all advantages of computer data management to the calibration environment.

Dry Block for Temperature Calibration

Technical Specifications	T-25N	T-350P	T-650P
Operating Range: room temperature: 18°C	-25°C to +125°C (-13°F to +257°F)	from room temperature up to 350°C (662°F)	from room temperature up to 650°C (1202°F)
Accuracy: reference with external thermometer	±0.1°C	±0.1°C ± 0.1% of reading	±0.1°C ± 0.1% of reading
	±0.05°C (limited by temperature uniformity)		
Resolution:	0.01°C	0.01°C	0.01°C
Stability:	±0.02°C	±0.05°C	±0.05°C
Temperature Uniformity:	±0.05°C		
Weight:	8.5kg (18.8lb)	5.8kg (12.8lb)	5.8kg (12.8lb)
Power Supply:	110 or 220VAC, 50/60Hz, 200 Watts max.		
Units / Temperature Scales:	°C or °F / IPTS-68 or ITS-90 user selectable		
Display:	Graphic LCD contrast adjustable		
Well Diameter / Depth:	1" without insert / 125mm		
Dimensions: (H, W, D)	250x180x270mm		
Warranty:	One year		

Electrical Input Ranges Specifications

Same as temperature calibrator TC-502, excluding thermocouples type B, R and S.

Order Code:

T-25N / T-350P / T-650P - - IN

Power Supply

- 1 - 110VAC
- 2 - 220VAC

Insert Included

Choose one of the inserts listed below

Code Example: T-25N-1-IN03, defines a T-25N dry block with 110VAC power supply, including insert of type IN03. When not specified, it comes with IN01 insert. Provided with carrying case, technical manual and cables.

Accessories

Inserts	Holes (Insert external diameter: 1")	Order Code (T-25N / T-350P)	Order Code (T-650P)
IN01	1x 3/4".	06.04.0011-00	06.04.0021-00
IN02	1x 1/2".	06.04.0012-00	06.04.0022-00
IN03	1x 6.0mm and 3x 1/4".	06.04.0013-00	06.04.0023-00
IN04	3x 6.0mm and 1x 1/4".	06.04.0014-00	06.04.0024-00
IN05	4x 6.0mm.	06.04.0015-00	06.04.0025-00
IN06	2x 6.0mm and 2x 1/4".	06.04.0016-00	06.04.0026-00
IN07	1x 6.0mm, 1x 8.0mm and 1x 3/8".	06.04.0017-00	06.04.0027-00
IN08	1x 6.0mm, 1x 3.0mm and 2x 1/4".	06.04.0018-00	06.04.0028-00
IN09	Without hole, to be drilled by the client.	06.04.0019-00	06.04.0029-00
IN10	Others, under ordering.	06.04.0020-00	06.04.0030-00

Precision Temperature Sensors:

- Probe 1/5 DIN straight - 4 plug connector.
- Probe 1/5 DIN 90° bend - 4 plug-connector.

Order Code

- 04.06.0101-00
- 04.06.0102-00

Communication Interface:

- RS-232 - 9 way D type Connector (COM1).
- RS-232 - 25 way D type Connector (COM2).
- RS-485

Order Code

- 06.02.1002 - 00
- 06.02.1004 - 00
- 06.02.1006 - 00

Carrying Case

Order Code: 06.01.0006-00.

CS-504 Software

Calibration Certificate

PRESYS INSTRUMENTS INC.

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* Windows is a Microsoft trade mark.