

# QUARTZ-T

PORTABLE TEMPERATURE CALIBRATOR -50/+150°C



The new **QUARTZ-T** are compact portable temperature calibrators for laboratory and field testing of temperature sensors, thermocouples and RTD sensors.

They are equipped with an Anticorrosion block with a 35 mm diameter hole and 135 mm depth in which the reduction inserts are housed; the interchangeability of the insert makes possible to test sensors of various lengths and diameters.

The equalizing block is heated and cooled by static Peltier thermoelectric modules.

They are equipped with a new 32-bit PID microprocessor-based controller with resolution up to 0.001 °C, unit setting in °C °F and K, programming of ascent/descent ramps and storage of the thermostats' operative temperature.

The new **QUARTZ-T** series of calibrators is equipped with an innovative touch-sensitive display, where the various icons are graphically displayed, making it easier to select different instrument settings.

The new **QUARTZ-T** are also available in the **3I version**, in which the instruments are equipped with an acquisition card having three configurable inputs (Pt1000, Pt100 3/4 wires; thermocouples E, J, K, N, R, S, T, B) with automatic compensation of cold junction. Possibility, to read probes with 0-10 V and 4-20 mA of output.

The REF input is provided for the reference sample probe, thus obtaining a complete calibration system which can be certified by Accredia centres, in compliance with ISO 9000 regulations. The EXT input is provided for probes that are being tested; hence, the instrument can display the temperature of the well, the temperature of the sensor to be checked and the temperature of the reference sample probe, at the same time. The **QUARTZ-T-PLUS** model has 3 inputs for external probes as standard.

The **QUARTZ-T** are equipped with B type USB serial interface to operate in automatic mode connected to the PC by means of the Aq2Sp2 software which is capable to automate control procedure and allows to print reports, so they are easily traceable in compliance with ISO 9000 standards.

## APPLICATIONS:

- Control and calibration of temperature sensors, in laboratory and in field, in accordance with ISO 9000 standards
- Control of thermostats
- Automatic computer-controlled calibrations

## MAIN CHARACTERISTICS:

- Operating range: -50°C (-58°F)/ +150°C (302°F)
- 2 different models
- High stability and precision
- New Touch Screen Display
- Display resolution up to 0.001
- Light weight and compactness
- Multi-hole inserts available
- Automatic ramp function
- USB connection
- 0-10 V and 4-20 mA input



# ACCESSORIES

## Standard Equipments:

- Calibrator QUARTZ-T
- Electric power cable
- Kit of fuses
- Thermostat connection cables
- Instruction manual
- Test report
- Tweezers for insert removing
- 2D1191: 6 holes insert (Ø 3.5 - 4.5 - 5.5 - 6.5 - 8.5 - 10.5 mm)
- USB serial interface
- Kit of clamp connection (only 3I version)

The calibrators are supplied with a standard insert, but various inserts with custom holes are also available, as well as an insert for calibrating optical pyrometers. **(Code 2D3080).**

## Accessories on demand:

- Insert with customizable holes
- Aq2Sp2 software
- ACCREDIA certificate (only 3I version) performed with sample probe connected to QUARTZ-T
- Pt 100 sample probe
- USB cable
- Cordura® soft bag
- Aluminium case



## Touch Display

Touch-sensitive display with graphic visualisation of the various functions allowing the various functions to be activated intuitively without having to consult the user manual.

The new 32-bit microprocessor-based PID controller allows a resolution down to 0.001 °C.



## Cordura® Soft Bag

**Code:** 2TRMBAG-FLUID

**Dimensions:** 410X220X380 mm

**Weight:** 1.450 kg

**Packaging dimensions:** 600x370x500 mm

Practical and sturdy Cordura® bag with two side pockets for inserts, a front pocket for documents, shoulder carrying strap; particularly lightweight, it is suitable for carrying and protecting the calibrator with its inserts.



## Aluminium case

**Code:** 2DC505-000

**Dimensions:** 450x280x380 mm

**Weight:** 4.8 Kg

**Packaging dimensions:** 600x370x500 mm

Sturdy aluminum case that provides maximum safety for carrying the instrument.



## COMPARATIVE TABLE

Specifications	QUARTZ-T	QUARTZ-T-PLUS
Temperature range	-30°C ÷ +150°C at 20°C	-50°C ÷ +120°C at 20°C
Display accuracy*	±0.15°C	
Units of measure	°C/°F/ K	
Display resolution	0.1% 0.01% 0.001°C	
Mean heating time (stabilization included)	40 min from 25 to 140°C	23 min from 25 to 140°C
Mean cooling time (stabilization included)	21 min from 140 to -25°C	31 min from 140 to -25°C
Stability**	±0.03°C	
Axial uniformity (at 60 mm)	±0.01°C	
Hole diameter	35 mm	
Hole depth	135 mm	
Insert material	Anticorodal	
Switch test, voltage	On/Off 4.5 Vdc	
Adjustable ramp function	from a min 0.1°C/min	
PC interface	B type USB	
External probes	Pt100 a 3 e4 fili, Pt1000 - J,K,N,R,S, E,T, B Thermocouples -Sensors with 4-20 mA - 0-10V output	
Automatic calibration	on 5 points	
Operating voltage	115 or 230 VAC 50/60 HZ	
Electric power	350W	400W
Calibrator size	160x350x360 mm	
Calibrator weight with standard equipment	9.3 Kg	

\* Temperature deviation between the display and the reference probe

\*\* Maximum temperature difference at a stable temperature over 30 minutes

## How to order:

### Standard Version

**QUARTZ-T-001**

115V 50/60 Hz

**QUARTZ-T-002**

230V 50/60 Hz

### Version with 3 configurable input

**QUARTZ-T-3I-1**

**QUARTZ-T-PLUS-1**

115V 50/60 Hz

**QUARTZ-T-3I-2**

**QUARTZ-T-PLUS-2**

230V 50/60 Hz

## Insert code:

• **2D1192**

blind insert  
DN 34.7x135 mm.

• **2DC567**

2 holes insert  
DN 34.7x135 mm;  
6.5 e 19.5 mm

• **INS.SPEC-633-3**

insert  
DN 34.7x135 mm  
with special holes  
1÷3 holes  
DN 3.5 ÷ 20 mm.

• **INS.SPEC-633-6**

insert  
DN 34.7x135 mm  
with special holes  
4÷6 holes  
DN 3.5 ÷ 20 mm.

• **INS.SPEC-633-10**

insert  
DN 34.7x135 mm  
with special holes  
7÷10 holes  
DN 3.5 ÷ 20 mm.

• **2D3080**

black body  
DN 35x135 mm with  
hole 26 mm.

• **3D3223**

black body probe  
Pt 100 DN3



## CERTIFICATION:

All instruments are supplied with final testing, stability and accuracy report traceable to Accredia standards.



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