

# QUARTZ

PORTABLE TEMPERATURE CALIBRATOR -50/+150°C



The **QUARTZ 633** and **QUARTZ 50** 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 0.01 °C, unit setting in °C °F and K, programming of ascent/descent ramps and storage of the thermostats' operative temperature.

The **QUARTZ 633** and **QUARTZ 50** are also available in the **2I version**, in which the instruments are equipped with an acquisition card having two configurable inputs (Pt1000, Pt100 3/4 wires; thermocouples E, J, K, N, R, S, T,

B) with automatic compensation of cold junction.

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 633** and **QUARTZ 50** are equipped with RS232 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 the laboratory and in the 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
- Light weight and compactness
- Retractable handle
- Multi-hole inserts available
- Automatic ramping function
- RS232 connection



## Standard Equipments:

- Calibrator QUARTZ
- 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)
- RS232 serial interface
- Kit of clamp connection (only 2I 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 2I version) performed with sample probe connected to QUARTZ
- Pt 100 sample probe
- USB/RS232 converter
- RS232 serial cable
- Cordura® soft bag
- Aluminium case



## Specific insert for testing touch-trigger probes

### Code: 2D4692

It is possible to deliver the insert with special probe Pt 100 for surface measurement.

## Cordura® Soft Bag

### Code: 2TRMBAG-PYROS

**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.



Specifications	QUARTZ 50	QUARTZ 633
Temperature range*	-50°C ÷ +150°C	-30°C ÷ +150°C
Display accuracy**	±0.15°C	±0.15°C
Units of measure	°C/°F/K	°C/°F/K
Display Resolution	0.1/0.01°C	0.1/0.01°C
Mean heating time (stabilization included)	from 25°C to 140°C 23 min	from 25°C to 140°C 40 min
Mean cooling time (stabilization included)	from 140°C to 25°C 31 min	from 140°C to 25°C 21 min
Stability (°C)***	±0.03	±0.03
Axial uniformity for 60 mm from the bottom	±0.01	±0.01
Hole diameter	35 mm	35 mm
Hole depth	135 mm	135 mm
Insert material	Anticorodal	Anticorodal
Switch test, voltage	On/Off 4.5VDC	On/Off 4.5VDC
Adjustable ramp function	from 0.1°C/min	from 0.1°C/min
Pc interface	RS232	RS232
Automatic calibration	on 5 points	on 5 points
Operating voltage	115 o 230 VAC 50/60 Hz	115 o 230 VAC 50/60 Hz
Electric power	400 W	350 W
Calibrator size	160x350x360 mm	160x350x360 mm
Calibrator weight with standard equipment	9.3 Kg	9.3 Kg
* Values measured at room temperature 20°C		
** Temperature deviation between the display and the reference probe		
*** Maximum temperature difference at a stable temperature over 30 minutes		

## How to order: Insert code:

### • Standard version

QUARTZ 50 - 00-1

115V 50/60 Hz

QUARTZ 50 - 00-2

230V 50/60 Hz

QUARTZ 633 - 00-1

115V 50/60 Hz

QUARTZ 633 - 00-2

230V 50/60 Hz

### • Version with 2 configurable input

QUARTZ 50 - 2I-1

115V 50/60 Hz

QUARTZ 50 - 2I-2

230V 50/60 Hz

QUARTZ 633 - 2I-1

115V 50/60 Hz

QUARTZ 633 - 2I-2

230V 50/60 Hz

### • 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