

# FLUID 100 T

PORTABLE TEMPERATURE CALIBRATOR T.Amb./ +250°C



## APPLICATIONS:

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

## MAIN CHARACTERISTICS:

- Operating range  
-35°C / 140°C  
-31°F / +284°F
- 2 different models
- High stability and precision
- Screen Touch Display
- Display resolution up to 0.001
- Light weight and compactness
- Holder for sensors under test
- Multi-hole inserts available
- Automatic ramp function
- USB connection

The new **FLUID100T** are portable thermostatic liquid calibrators used for checking thermocouples, platinum resistance and glass thermometers in the laboratory as well as in the field.

It consists of an aluminium liquid bath whose capacity is about 400 cc and it is constantly kept homogeneous by a magnetic mixer whose speed is adjustable according to the viscosity of the fluid used. Low-temperature models with subzero field do not employ external cooling fluids; the equalization block is heated and cooled by a static Peltier cell system.

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 ascendent/ descendent ramps and storage of the thermostats operative temperature.

The new **FLUID100T** 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 **FLUID100T** are also available in the **3I version**, in which the instruments are

equipped with an acquisition card having three configurable inputs to be able to connect all types of sensors:

- EXT and REF to be able to connect thermocouples type B, E, J, K, N, R, S, T and RTDs type PT100, PT1000
- ANALOG for probes with 0-10V or 4-20 mA 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 calibrators 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 allow to print reports, so they are easily traceable in compliance with ISO 9000 standards.



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**TESTING  
EXPERTISE**

## Standard Equipment:

- Bottle 500cc of silicon oil 47V10
- Closure cap for transport
- Fluid emptying system
- Holder for glass thermometers
- Power supply cable
- Fuses kit
- Thermostat connection cables
- Instruction manual
- Kit of clamp connection (only 3I version)
- Cordura® Soft Bag

## Accessories on demand:

- Aluminium insert 2D2846.
- Blind aluminium insert 2d2678
- Insert with customizable holes
- Extension Tube
- Aq2Sp2 software
- USB cable
- ACCREDIA certificate (only 3I version)
- water-cooling coil - 0FLUIDCOOLING

## Touch Display

Touch-sensitive display with graphic visualization 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



## Inserts

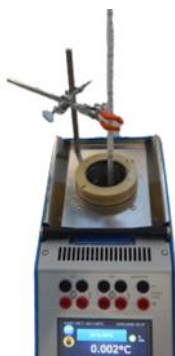


Perforated insert for Fluid100+T  
**Code: 2D2846**

Perforated insert for FluidT  
**Code: 2D4566**

The Fluids can be equipped with Anticorodal inserts with holes on demand to be used as dry calibrators.

## Supports



Fluids are equipped with adjustable holders to support the probes under test or thermometers

## Extension tube



The extension tube is suitable for increasing the depth of the liquid tank  
Total depth: 230 mm

## COMPARATIVE TABLE

Specifications	FLUID100+T	FLUID100T
Temperature range*	-35÷+120°C	-18°C ÷ +140°C
Display	SCREEN TOUCH	
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)	from T <sub>amb</sub> to 140°C approx 40 min.	from T <sub>amb</sub> to 140°C approx 55 min.
Mean cooling time (stabilization included)	from 120°C to T <sub>amb</sub> approx 100 min.	from 140°C a T <sub>amb</sub> approx 50 min.
Stability***	±0.02°C at 0°C	
Axial uniformity	±0.05°C	
Radial uniformity measured from the bottom up to 40 mm	±0.02°C at 0°C	±0.07°C at 140°C
Hole diameter	45 mm	60 mm
Hole depth	170 mm	
Insert material	Anticorodal	
Switch test, voltage	On/Off 4.5 V DC	
Adjustable ramp function	from 0.1°C /min.	
P.C interface	B type USB	
External probes	Pt100 at 3/4 wires Pt1000 - Thermocouples: J,K,N,R,S,E,T,B - Sensor with 0-10 V or 4 - 20 mA output	
Automatic calibration	on 5 points	
Operating voltage	230 or 115 VAC	
Electric power	350 VA	300 VA
Calibrator size	160x360x350 mm	
Calibrator weight with standard equipment	11Kg	

Diameter sensor\_ 6 mm

The achievement of stabilization is confirmed by a symbol V and a beep

\* 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 minute

## Cordura® Soft Bag

**Code:** 2TRMBAG-FLUID  
**Dimensions:** 410x220x380 mm  
**Weight:** 1.45 kg  
**Packaging dimensions:** 600x370x500 mm

## Aluminium rigid case

**Code:** 2DC505-000  
**Dimensions:** 450x280x380 mm  
**Weight:** 4.8 kg  
**Packaging dimensions:** 600x370x500 mm

## Silicon Oil available



Bottle 500 cc of silicon oil 47V20 (-20°C/+200°C)

**BOTTLE47V20**

Bottle 500 cc of silicon oil 47V50 (30°/+230°C)

**BOTTLE47V50**

Bottle 500 cc of silicon oil 47V100 (50°C/ +250°C)

**BOTTLE47V100**

## How to order:

### FLUID100T

- Standard version
- 00-1 115V 50/60 Hz
- 00-2 230V 50/60 Hz

### FLUID100+T

- Standard version
- 00-1 115V 50/60 Hz
- 00-2 230V 50/60 Hz

### FLUID100T/FLUID100+T

- Version with 3 configurable input
- 3I-1 115V 50/60 Hz
- 3I-2 230V 50/60 Hz



## CERTIFICATION:

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



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