

# TM-Series Compact Temperature Calibrators



## Compact Temperature Calibrators



### Benefits

- Interchangeable inserts
- Multi-hole insertion tubes
- New forced air ventilation system reduce heating and cooling time
- Automatic switch test /ramp programming
- Easy Re-calibration from keyboard
- Compact and light weight
- Rugged and robust
- Very fast heating/cooling time
- 110/220 Vac Universal operation

The Eurotron TM series are innovative dry block calibrators especially designed for field application, robust and able to maintain high accuracy and stability in severe conditions such as offshore rigs and on board of vessels. These self-contained units are very compact, portable and are probably the lightest units available in the market. The innovative forced air ventilation greatly reduces the cooling time and prevents the sensors under test from being exposed to excessive heating.

The TM series consist of 3 models to cover a temperature range from -45 °C to 650 °C

Eurotron control technology ensures extremely fast setting time and offers an excellent absolute temperature stability and well to well uniformity. The ramp function allows for calibrating the temperature loops by monitoring the

temperature in the control rooms while the calibrator automatically generates temperature.

These units offer an electrical switch test input along with a fully programmable ramp, to perform testing of temperature switches so that no other auxiliary unit is needed.

T 375-M and T650-m only weigh 6 KGs, with a dimension of only 130x280x260 mm but they still offer a large block capacity of 26x150 mm depth immersion. Multi-hole inserts are available to suit the variety of probe sizes, and the large test well (26 mm) ensures the testing of multiple sensors at the same time.

T125-M only weighs 4.9 Kg and features 2 wells with replaceable inserts - The high efficiency peltier element and block design ensures very fast heating and cooling time.

Selection guide TM series	T125-M	T375-M	T650-M
Temperature range	-41 to 150° from Tamb	Tamb to 375°C	Tamb to 650°C
Heating time	40 min to max	18/°C min	18/°C min
Immersion depth	110 mm	150 mm	150 mm
Well diameter	2 x 13 mm	26 mm	26 mm
Accuracy	±0.25°C + 1 lsd		±0.9°C
Stability	±0.05°C	±0.15°C	±0.3°C
Resolution	0.1°C	0.1°C	0.1°C
Read-out	°C/F	°C/F	°C/F
Power Supply( switching)	110/220 Vac	110/220 Vac	110/220 vac

### Fast Heating/cooling

The T375-M and T650-M feature an innovative heating block design call. The new design allows for very fast heating and cooling time yet maintaining a block dimension of 26 x 150 mm to allow for calibration of bigger diameter temperature sensors or bi-metallic thermometers. This new forced air ventilation system keeps the balance between temperature stability / homogeneity an rapid heating / cooling.

## Easy to transport

### TMSER-TC

Water proof hard transit case  
Robust IP 65 rated water proof transit case with customised foam an inserts for space to take TM dry block, 4s inserts, accessories, manual etc.  
Particularly suitable for transport in the marine industry or in the exposed conditions and tough environment.



### TMSER-VC

Rosbut Vinal case with pockets for inserts



# TM-Series Compact Temperature Calibrators



## Removable Inserts

The removable inserts add greater flexibility and extend the use of the TM series- Different size temperature sensors can then be calibrated- We offer a comprehensive range of inserts, but if you have any particular requirement, we can offer specific/customised hole size

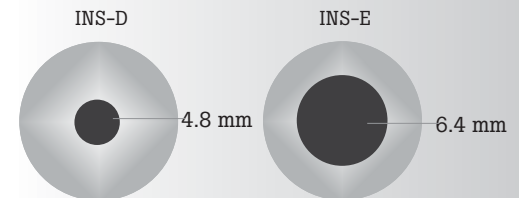
(in accordance with the maximum available diameter)  
Inserts for T125-M and T375-M are made in aluminium- Inserts for T650 M are made out of brass- The nominal diameter is the actual diameter of the holes size.

Part number	T125-M inserts
T125M-INS-B	T125-M Insert 110x13, blank
T125M-INS-A	T125-M Insert 110x13 mm, 1 hole 3.2 mm (1/8")
T125M-INS-C	T125-M Insert 110x13 mm, 1 hole 4 mm (5/32")
T125M-INS-D	T125-M Insert 110x13 mm, 1 hole 4.8 mm (3/16")
T125M-INS-E	T125-M Insert 110x13 mm, 1 hole 6.4 mm (1/4")
T125M-INS-F	T125-M Insert 110x13 mm, 1 hole 7.9 mm (5/16")
T125M-INS-G	T125-M Insert 110x13 mm, 1 hole 9.5 mm (3/8")
T125M-INS-H	T125-M Insert 110x13 mm, 1 hole 11.1 mm (7/16")
Part number	T375 M Inserts
T375M-INS-A	T375M Insert 4 holes, Ø 3.2, 4.8, 6.4, 11.1 mm
T375M-INS-B	T375M Insert 2 holes, Ø 6.4, 12.7 mm
T375M-INS-C	T375M Insert Blank
Part number	T650-M inserts
T650M-INS-A	T650M Insert 4 holes, Ø 3.2, 5, 7, 10.5 mm
T650M-INS-B	T650M Insert 2 holes, Ø 7, 12.7 mm
T650M-INS-C	T650M Insert Blank
T650M-INS-D	T650M Insert 1 hole, Ø 15.7 mm
T650M-INS-E	T650M Insert 1 hole, Ø 17.5 mm
T650M-INS-G	T650M Insert 3 holes, Ø 4.5, 6.4, 10.5 mm
T650M-INS-S	T650M insert customised size



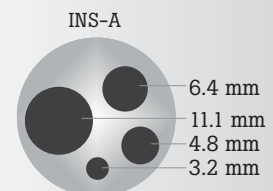
### T125-INS-D / T125-INS-E

Two standard inserts supplied



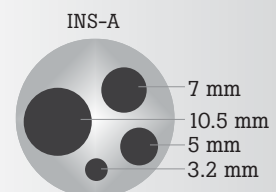
### T375-INS-A

multi-hole standard insert supplied with T650M and T350M



### T650M-INS-A

multi-hole standard insert supplied with T650M and T350M



## Ordering

Part number	Description
T125/375/650-M are supplied as standard with instruction manual, calibration certificate traceable to international standard, power cord, standard insert, tweezers for inserts removal and switchtest cable-	
T125-M is supplied with INS-D and INS-E as standard	
T375/T650M are supplied with INS-A as standard	
T125M-EU	T125-M Temperature Calibrator -24 to 125°C-110/220V, EU
T125M-UK	T125-M Temperature Calibrator -24 to 125°C,-110/220V, UK
T125M-US	T125-M Temperature Calibrator -24 to 125°C, 110/220V, US
T375M-EU	T375-M Temperature Calibrator Tamb/375 °C-110/220V, EU
T375M-UK	T375-M Temperature Calibrator Tamb/375 °C-110/220V, EK
T375M-US	T375-M Temperature Calibrator Tamb/375 °C-110/220V, US
T650M-EU	T650-M Temperature Calibrator Tamb/650 °C-110/220V, EU
T650M-UK	T650-M Temperature Calibrator Tamb/650 °C-110/220V, EK
T650M-US	T650-M Temperature Calibrator Tamb/650 °C-110/220V, US
Accessories	
TMSER-TC	Robust Transit case, IP65, T125/T375/T650M
TMSER-VC	Vinyl Transit case with pockets, T125/T375/T650M

# TM-Series Compact Temperature Calibrators



Specifications	T125-M	T375-M	T650-M
Temperature range	-45°C to 150°C from T amb	Amb+10°C to 375°C	Amb +15°C to 650°C
Heating time(included stability)	Ambient to 150°C:40 minutes	30°C to 375°C: 20 minutes	50°C to 650°C: 35 minutes
Cooling time(included stability)	Ambient to -20°C:17 minutes	375°C to 100°C: 40 minutes	650°C to 100°C: 60 minutes
Axial Uniformity at 40mm			
	±0,05°C at -20°C	±0,02 °C at 50°C	±0,13 °C at 250°C
	±0,04°C at 0°C	±0,05°C at 150°C	±0,15°C at 450°C
	±0,1°C at 100°C	±0,15°C at 375°C	±0,35°C at 650°C
Axial Uniformity at 60mm			
	±0,15°C at -20°C	±0,03 °C at 50°C	±0,17 °C at 250°C
	±0,08°C at 0°C	±0,08°C at 150°C	±0,45°C at 450°C
	±0,2°C at 100°C	±0,25°C at 375°C	±0,55°C at 650°C
Well- to- well uniformity at 40mm			
	±0,02°C at -20°C	±0,1 °C at 50°C	± 0.22°C
	±0,02°C at 0°C	±0,15°C at 150°C	
	±0,05°C at 100°C	±0,2°C at 375°C	
Immersion depth	104 mm	150 mm	
Well diameter	2 x 13 mm	26 mm	
Standard Insert Supplied	T125M-INS-D 1 hole 4.8 mm(3/16") T125M-INS-D 1 hole 6.4 mm(1/4")	T375M-INS-A 4 holes, Ø 3,2-4.8-6.4-11.1mm	T650M-INS-A 4 holes, Ø 3,2-5-7-10,5mm
Accuracy	±0.25°C + 1 lsd	±0.25°C at 150°C	±0.9°C+ 1 lsd
		±0.5°C at 375°C	
Stability	±0.05°C full range	±0.15°C full range	±0,3°C full range
Resolution	0.1°C		
Read-out	°C /°F		
Switch test	12 VDC	5 VDC	
Dimension	130x260x280 mm		
Weight	4.9 Kg	5,4 Kg	6 Kg
Power Supply	100-230V±10%,	115/230 ±10%,	
Power	50/60Hz, 80 W	50/60Hz, 600W	

Diameter of the reference sensor used to test the uniformity:

T-125M: sensor Pt100 diameter 3 mm

T-325M: sensor Pt100 diameter 3 mm

T-650M: sensor tcN diameter 4,5 mm

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