

# Metrological Dry Block Sub-Zero Temperature Calibrator

Portable/Benchtop

**Metcal 40**

Lab Standard

Precision Dry Block Calibrator with Multihole Interchangeable Thermowells

Ideal for quick / fast Site Calibration of RTDs / TCs / Bi-Metal Thermometers, Temperature Switches / Indicators etc. in Industrial & Marine Application

Measuring Accuracy :  $\pm 0.025\%$  of rdg.

High Accuracy, Resolution & Stability with Measurement Capability for mV / V / mA, Resistance TC (ISA Types : J, K, R, S, N, B, T), RTD (Pt100, Pt200, Pt500, Pt1000 : IEC Standard) Signals



## SALIENT FEATURES

- Advanced – Micro-controller based Technology
- Heavy Duty Portable / Bench-top Model
- High Accuracy, Resolution & Stability
- Large Graphic Display (Multi-information Display)
- Measurement Capability for TC, RTD, mV / mA / V & Resistance Signals
- Touch Membrane Keypad
- Switch Test Contact Measurement
- Multi-hole Thermowell Inserts
- Computer Interface & Calibration Software
- Count down timer (Shows when unit is stable)
- Stability Indicator

## SPECIFICATIONS

Range	-10°C to 120°C		
Resolution	0.01°C		
Accuracy	$\pm 0.2^\circ\text{C}$		
Stability	$\pm 0.02^\circ\text{C}$		
Stabilisation Time	7 Minutes		
Temperature Readout	°C / °F Selectable		
Axial Uniformity (40 mm)	$\pm 0.2^\circ\text{C}$		
Radial Uniformity	$\pm 0.02^\circ\text{C}$		
Well Diameter	30 mm		
Immersion Depth	150 mm		
Heating Time (Amb. to 120°C)	10 Minutes approx.		
Cooling Time (Amb. to -10°C)	15 Minutes approx.		
Cooling Time (120 to -10°C)	25 Minutes approx.		
Switch Test facility	Provided		
Interchangeable Thermowells	Multihole to suit 2 x ¼" & 1 x ½" Probes. Other Sizes available as optional		
Housing	Bench-top		
Power Supply	110V AC to 240V AC, 50 to 60 Hz, 140 W		
Instrument Dimensions (L x D x H)	160 x 365 x 450 mm		
Instrument Weight (approx.)	9 Kg.		
Measurement Capability	Thermocouples	ISA Types J, K, R, S, N, B, T	RTD Pt100, Pt200, Pt500, Pt1000
	mA	0 to 25 mA	mV 0 to 100 / 1000 mV
	Volt	0 to 10 V	Resistance 0 to 500Ω / 3.5 KΩ

**MEASUREMENT : RANGE, RESOLUTION & ACCURACY**

Type	Range	Resolution	Accuracy (% of reading)
mV (Low)	0 to 100	0.001	$\pm(0.025\%+2\mu\text{V})$
mV (High)	0 to 1000	0.01	$\pm(0.025\%+10\mu\text{V})$
Volts	0 to 10	0.0001	$\pm(0.025\%+0.08\text{mV})$
mA	0 to 25	0.0001	$\pm(0.025\%+0.4\mu\text{A})$
Ohms	0 to 500	0.001	$\pm(0.025\%+12\text{m}\Omega)$
KOhms	0 to 3.5	0.00001	$\pm(0.025\%+120\text{m}\Omega)$
RTD Pt100	-100 to 800	0.01	$\pm(0.025\%+0.1^\circ\text{C})$
RTD Pt200	-100 to 600	0.1	$\pm(0.025\%+0.15^\circ\text{C})$
RTD Pt500	-100 to 530	0.1	$\pm(0.025\%+0.1^\circ\text{C})$
RTD Pt1000	-100 to 650	0.01	$\pm(0.025\%+0.1^\circ\text{C})$

Type	Range	Resolution	Accuracy (% of reading)
TC Type J	-100 to 1200	0.1	$\pm(0.025\%+0.1^\circ\text{C})$
TC Type K	-60 to 1260	0.1	$\pm(0.025\%+0.1^\circ\text{C})$
TC Type R	150 to 1700	0.1	$\pm(0.025\%+0.2^\circ\text{C})$
TC Type S	170 to 1700	0.1	$\pm(0.025\%+0.2^\circ\text{C})$
TC Type N	0 to 1300	0.1	$\pm(0.025\%+0.1^\circ\text{C})$
TC Type B	920 to 1820	0.1	$\pm(0.025\%+0.2^\circ\text{C})$
TC Type T	0 to 400	0.1	$\pm(0.025\%+0.1^\circ\text{C})$

**STANDARD INCLUSIONS**

- Basic Instrument
- Test Leads
- Mains Cable
- Multihole Insertion Tubes (to suit 2 x ¼" & 1 x ½" probes)
- Tool for Insertion Tubes
- Spare Fuses
- Computer Interface & "METCAL" Calibration Software
- Calibration Certificates are issued in Accordance with our Scope as granted by NABL per ISO/IEC 17025:2017 Standards
- Instruction Manual
- Carrying Case

**OPTIONAL (ADD-ON) ITEMS**

- Additional Thermowells / Insertion Tubes & Multihole – Consult us

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