

Высокотемпературные сухоблочные калибраторы NICAL, Metcal, МТС, НН

Технические характеристики

По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231	Калининград (4012)72-03-81	Омск (3812)21-46-40	Сыктывкар (8212)25-95-17
Ангарск (3955)60-70-56	Калуга (4842)92-23-67	Орел (4862)44-53-42	Тамбов (4752)50-40-97
Архангельск (8182)63-90-72	Кемерово (3842)65-04-62	Оренбург (3532)37-68-04	Тверь (4822)63-31-35
Астрахань (8512)99-46-04	Киров (8332)68-02-04	Пенза (8412)22-31-16	Тольятти (8482)63-91-07
Барнаул (3852)73-04-60	Коломна (4966)23-41-49	Петрозаводск (8142)55-98-37	Томск (3822)98-41-53
Белгород (4722)40-23-64	Кострома (4942)77-07-48	Псков (8112)59-10-37	Тула (4872)33-79-87
Благовещенск (4162)22-76-07	Краснодар (861)203-40-90	Пермь (342)205-81-47	Тюмень (3452)66-21-18
Брянск (4832)59-03-52	Красноярск (391)204-63-61	Ростов-на-Дону (863)308-18-15	Ульяновск (8422)24-23-59
Владивосток (423)249-28-31	Курск (4712)77-13-04	Рязань (4912)46-61-64	Улан-Удэ (3012)59-97-51
Владикавказ (8672)28-90-48	Курган (3522)50-90-47	Самара (846)206-03-16	Уфа (347)229-48-12
Владимир (4922)49-43-18	Липецк (4742)52-20-81	Саранск (8342)22-96-24	Хабаровск (4212)92-98-04
Волгоград (844)278-03-48	Магнитогорск (3519)55-03-13	Санкт-Петербург (812)309-46-40	Чебоксары (8352)28-53-07
Вологда (8172)26-41-59	Москва (495)268-04-70	Саратов (845)249-38-78	Челябинск (351)202-03-61
Воронеж (473)204-51-73	Мурманск (8152)59-64-93	Севастополь (8692)22-31-93	Череповец (8202)49-02-64
Екатеринбург (343)384-55-89	Набережные Челны (8552)20-53-41	Симферополь (3652)67-13-56	Чита (3022)38-34-83
Иваново (4932)77-34-06	Нижний Новгород (831)429-08-12	Смоленск (4812)29-41-54	Якутск (4112)23-90-97
Ижевск (3412)26-03-58	Новокузнецк (3843)20-46-81	Сочи (862)225-72-31	Ярославль (4852)69-52-93
Иркутск (395)279-98-46	Ноябрьск (3496)41-32-12	Ставрополь (8652)20-65-13	
Казань (843)206-01-48	Новосибирск (383)227-86-73	Сургут (3462)77-98-35	
Россия +7(495)268-04-70	Киргизия +996(312)-96-26-47	Казахстан +7(7172)727-132	

Dry Block Temperature Calibrator

Portable/Benchtop

NICAL Series

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 Applications

Covering Wide Temperature Ranges : -30°C to 1200°C (NICAL 50 / 650 / 1200)

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

Full color display makes user easy to read.

The main temperature indications are SET, READ, UUT (Unit Under Test), Stability Status etc.

Inbuilt Readout for PRT

SALIENT FEATURES

- Informative Color Display with feather touch
- Heavy Duty Portable / Bench-top Model
- Rugged Field Use & for Calibration at Site
- Auto-tune PID Control
- Stability Indicator
- Switch Test facility
- Fast and Reliable
- Improved Accuracy, Resolution & Stability
- Interchangeable Thermowell Inserts, Single / Multihole



SPECIFICATIONS

MODEL	NICAL 50	NICAL 650	NICAL 1200
Operating Range	-30°C to 140°C	50°C to 650°C	150°C to 1200°C
Resolution	0.01°C	0.01°C	0.1°C
Accuracy	$\pm 0.2^\circ\text{C}$	$\pm 0.4^\circ\text{C}$	$\pm 2^\circ\text{C}$
Stability	$\pm 0.02^\circ\text{C}$	$\pm 0.04^\circ\text{C}$	$\pm 0.2^\circ\text{C}$
Radial Uniformity	$\pm 0.02^\circ\text{C}$	$\pm 0.04^\circ\text{C}$	$\pm 0.2^\circ\text{C}$
Axial uniformity	$\pm 0.2^\circ\text{C}$ (40 mm)	$\pm 0.4^\circ\text{C}$ (40 mm)	$\pm 0.6^\circ\text{C}$ (20 mm)
Heating Time	33 to 140°C -- 20 min	50 to 650°C---- 30min	200 to 1200°C----1.5h
Cooling Time	33 to -30°C -- 25 min	650 to 100°C----75min	1200 to 200°C----3h
Time to Stability (typical)	7 min	15 min	15 min
Well Diameter x Depth	$\varnothing 30\text{mm} \times 150\text{mm}$	$\varnothing 30\text{mm} \times 150\text{mm}$	$\varnothing 30\text{mm} \times 105\text{mm}$
Weight	9 Kg	11 Kg	12.6 Kg
Size (L x D x H)	160 x 365 x 450 mm		
Computer Interface	USB Interface		
Mains Power	230V AC 50HZ - Optional 115V AC , 60HZ		

(P.T.O.)

Technical Datasheet

MEASUREMENT : RANGE, RESOLUTION & ACCURACY

Type	Range	Resolution	Accuracy (% of reading)
mV (Low)	0 to 200	0.001	$\pm(0.025\%+2\mu\text{V})$
mV (High)	0 to 2000	0.01	$\pm(0.025\%+10\mu\text{V})$
Volts	0 to 20	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 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	0.01	$\pm(0.025\%+0.15^\circ\text{C})$
RTD Pt500	-100 to 530	0.01	$\pm(0.025\%+0.1^\circ\text{C})$
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	$\pm(0.025\%+0.1^\circ\text{C})$

CALIBRATION SOFTWARE

- The NICAL Series Dry Block Calibrator is supplied with Nagman calibration software NICAL
- All calibrations can be documented with a certificate, given that the NICAL Series Dry block Calibrator is controlled from a PC.
- Auto calibration
- Semi-automatic / Manual
- When the calibrator has reached the desired temperature and stability it will prompt you to type in the UUT temperature.



STANDARD INCLUSIONS

- Basic Instrument
- Test Leads
- Mains Cable
- Multi hole Insertion Tubes (to suit 2 x 6 mm & 1 x 8 mm probes)
- Tool for Insertion Tubes
- Spare Fuses
- "NICAL" 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

- Additional Thermo wells/Insertion Tubes & Multi hole - Contact us
- Reference Indicator (Accuracy $\pm 0.015\%$ Rdg.) & Reference Sensor - Contact us

Metrological Dry Block High Temperature Calibrator

Portable/Benchtop

Metcal 1200

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 Applications

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
128 x 64 Graphic Display
Measurement Capability for TC, RTD, mV / mA / V & Resistance Signals
Touch Membrane Keypad
Switch Test Contact Measurement
Single / Multi-hole Thermowell Inserts
Computer Interface & Calibration Software
Count down timer (Shows when unit is stable)
Stability Indicator

SPECIFICATIONS

Range	150°C to 1200°C			
Resolution	0.1°C			
Accuracy	$\pm 2^\circ\text{C}$			
Stability	$\pm 0.3^\circ\text{C}$			
Stabilisation Time	15 Minutes			
Temperature Readout	°C / °F Selectable			
Well Diameter	33 mm			
Immersion Depth	105 mm			
Heating Time (150 to 1200°C)	90 Minutes (approx.)			
Cooling Time (1200 to 800°C)	30 Minutes (approx.)			
Cooling Time (800 to 150°C)	120 Minutes (approx.)			
Switch Test facility	Provided			
Interchangeable Thermowells	Multihole to suit (8.5 mm x 2) + (6.5 mm x 1) Probes			
Housing / Mounting	Bench-top			
Power Supply / Consumption	230V AC, 50 Hz – 600 W			
Instrument Dimensions (L x D x H)	160 x 365 x 450 mm			
Instrument Weight (approx.)	11.6 Kg.			
Measurement Capability	Thermocouples	ISA Types J, K, R, S, N, B, T	RTD	Pt100, 200, 500, 1000 IEC Std.
	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	0.01	$\pm(0.025\%+0.15^\circ\text{C})$
RTD Pt500	-100 to 530	0.01	$\pm(0.025\%+0.1^\circ\text{C})$
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 (8.5 mm x 2) + (6.5 mm x 1) 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 - Contact us

Universal Dry Block High Temperature Calibrator

Portable/Benchtop

MTC 1200

Measurement Capability

Precision Dry Block Calibrator with Interchangeable Thermowells

Ideal for Steel, Glass, Metallurgical Industries, Cement Plants, Refineries, Fertilizer Plants, Thermal Power Stations etc.

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

SALIENT FEATURES

Advanced – Micro-controller based Technology
Heavy Duty Portable / Bench-top Model
High Accuracy, Resolution & Stability
128 x 64 Graphic Display
Measurement Capability for TC, RTD, mV/mA/V & Resistance Signals
Touch Membrane Keypad
Switch Test Contact Measurement
Interchangeable Single hole Thermowell Inserts
Computer Interface & Calibration Software



SPECIFICATIONS

Range	300°C to 1200°C			
Resolution	1°C			
Accuracy	±2°C			
Stability	±0.5°C			
Stabilisation Time	15 Minutes			
Temperature Readout	°C / °F Selectable			
Well Diameter	26 mm			
Immersion Depth	105 mm			
Dry Block Material	Inconel			
Heating Time (Ambient to max.)	60 Minutes approx.			
Cooling Time (to min.)	45 Minutes approx. (with Forced Air Cooling) **			
Switch Test facility	Provided			
Thermowell Dia	8 mm			
Housing / Mounting	Bench-top			
Power Supply	230V AC, 50 Hz			
Instrument Dimensions (L x D x H)	160 x 365 x 450 mm			
Instrument Weight (approx.)	15 Kg.			
Measurement Capability	Thermocouples	ISA Types J, K, R, S, N, B, T	RTD	Pt100 IEC Std.
	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
mV (Low)	0 to 100	0.01	±0.05% F.S.
mV (High)	0 to 1000	0.1	±0.05% F.S.
Volts	0 to 10	0.001	±0.05% F.S.
mA	0 to 25	0.001	±0.05% F.S.
Ohms	0 to 500	0.01	±0.05% F.S.
KOhms	0 to 3.5	0.0001	±0.05% F.S.
RTD Pt100	-100 to 800	0.1	±0.05% F.S.

Type	Range	Resolution	Accuracy
TC Type J	-100 to 1200	0.1	±0.1% F.S.
TC Type K	-60 to 1260	0.1	±0.1% F.S.
TC Type R	150 to 1700	0.1	±0.1% F.S.
TC Type S	170 to 1700	0.1	±0.1% F.S.
TC Type N	0 to 1300	0.1	±0.1% F.S.
TC Type B	920 to 1820	0.1	±0.1% F.S.
TC Type T	0 to 400	0.1	±0.1% F.S.

STANDARD INCLUSIONS

- Basic Instrument
- Test Leads
- Mains Cable
- Thermowell of 8 mm Dia
- Tool for Insertion Tubes
- Spare Fuses
- 1/4" BSP (F) Hose Adaptor with 6 mm Hose (1.5 Meter Length)
- Computer Interface
- "MTCCal" Calibration Software
- Traceable Calibration Certificate
- Instruction Manual
- Carrying Case

OPTIONAL (ADD-ON) ITEMS

- Additional Thermowells / Insertion Tubes : Single hole
- Calibration Certificates are issued in Accordance with our Scope as granted by NABL per ISO/IEC 17025:2017 Standards

Technical Datasheet

High Temperature Dry Block Calibrator

Semi-Portable

1200 HN

Heavy Duty

Ideal for Steel, Glass, Metallurgical Industries, Cement Plants, Refineries, Fertilizer Plants, Thermal Power Stations etc.

Stable High Temperature Source (1200°C) for Calibration of Multiple (upto 6) Sensors at High Temperature.

SALIENT FEATURES

Cost effective High Temperature Source (Max.: 1200°C)
Multihole / Interchangeable (Thermowell) Inserts to suit
High Stability & Accuracy
Auto-tune PID Control
Forced Air Cooling provision
Computer Interface
"Caltemp" Calibration Software – Optional

** Improved Accuracies achieved thro' Comparison Techniques*



SPECIFICATIONS

Range	250°C to 1200°C
Resolution	0.1°C upto 999.9; 1°C above 999.9
Accuracy	Better than $\pm 2.5^\circ\text{C}$
Stability	Better than $\pm 0.5^\circ\text{C}$ (below 600°C)
Stabilisation Time	20 Minutes (above 500°C) (approx.)
Well Diameter	45 mm
Immersion Depth	150 mm
Heating Time (to max) approx.	90 Minutes
Cooling Time (with well, with forced air cooling) (1200°C to 100°C)	260 Minutes approx.
Multihole Thermowells	2 x 7 mm + 2 x 9 mm or to suit
Switch Test facility / Supply	Provided / 5 VDC (open)
Power Supply / Consumption	230V AC / 50 Hz / 2700 W
Temperature Control	Auto-tune PID Control
Forced Air Cooling **	Provision available
Transmitter Power Supply	24V DC
Instrument Dimensions (W x D x H)	210 x 365 x 480 mm
Instrument Weight	16 Kgs.

**** Dry Compressed Air required (@ 7 bar)**

Consult us for Special Heavy Duty Model with Dry Block 70 mm Dia & Immersion Depth 250 mm to accommodate Multiple Inserts at a time & an Interchangeable Thermowell.

Ideal for calibration of longer & bulky Temperature Probes / Assemblies – consult us with specific requirement.

STANDARD INCLUSIONS

- Basic Instrument
- Cable for Thermostat Switch Test
- Mains Cable
- Insertion Tube - Multihole
- Tool for Insertion Tube
- Spare Fuses
- ¼" BSP (F) Hose Adaptor with 6 mm Hose (1.5 Meter Length)
- Computer Interface
- Traceable Calibration Certificate
- Instruction Manual

P.T.O.

OPTIONAL (ADD-ON) ITEMS

- Digital Temperature Indicator
- Interchangeable / Single Hole Thermowells – other sizes
- Reference Thermocouple
- “Caltemp” Calibration Software
- Power Supply 110V AC, 60 Hz
- Calibration Certificates are issued in Accordance with our Scope as granted by NABL per ISO/IEC 17025:2017 Standards

Very High Temperature Dry Block Calibrator

Semi-Portable with Castor Wheels

1500 HN

Heavy Duty

Ideal for Steel, Glass, Ceramic Semi-Conductor Industries etc. for Calibration of noble Metal Thermocouples – Type R / S / B etc.

SALIENT FEATURES

Fast, Stable & Accurate
Autotune PID Controller
Dry Block – High Alumina Ceramic
Immersion Depth : 240 mm
Multihole Thermowell : ID 6, 8, 10 & 14 mm
Semi-Portable (with Castor Wheels)
Computer Interface - RS-232 (optional)

SPECIFICATIONS

Range	500°C to 1500°C
Resolution	0.1°C
Accuracy	±0.5% of reading
Stability	±0.5°C
Stabilisation Time	30 Minutes (approx.)
Ceramic Dry Block Dia	50 mm OD
Probe Immersion Depth	240 mm
Heating Element	Silicon Carbide
Heating Time (to max)	210 Minutes (approx.)
Thermowell Hole	ID : 6 mm; 8 mm; 10 mm; 14 mm
Power Supply / Consumption	230V AC / 50 Hz / 3.5 KW
Housing / Mounting	Floor Model on Castor Wheels
Temperature Control	Auto-tune PID Control
Instrument Dimensions (W x D x H)	250 x 410 x 625 mm (without wheel)
Instrument Weight	57 Kgs.

STANDARD INCLUSIONS

- Basic Instrument
- Ceramic Dry Block with 4 sizes of Holes
- Mains Cable
- Spare Heater 6 Nos.
- Spare Fuse 1 No.
- Control Thermocouple with Connector
- Traceable Calibration Certificate
- Instruction Manual

OPTIONAL (ADD-ON) ITEMS

- 110V / 60 Hz Power Supply
- Single Hole Thermowell – other sizes
- Reference Thermocouple
- Computer Interface – RS232
- Calibration Certificates are issued in Accordance with our Scope as granted by NABL per ISO/IEC 17025:2017 Standards



По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231	Калининград (4012)72-03-81	Омск (3812)21-46-40	Сыктывкар (8212)25-95-17
Ангарск (3955)60-70-56	Калуга (4842)92-23-67	Орел (4862)44-53-42	Тамбов (4752)50-40-97
Архангельск (8182)63-90-72	Кемерово (3842)65-04-62	Оренбург (3532)37-68-04	Тверь (4822)63-31-35
Астрахань (8512)99-46-04	Киров (8332)68-02-04	Пенза (8412)22-31-16	Тольятти (8482)63-91-07
Барнаул (3852)73-04-60	Коломна (4966)23-41-49	Петрозаводск (8142)55-98-37	Томск (3822)98-41-53
Белгород (4722)40-23-64	Кострома (4942)77-07-48	Псков (8112)59-10-37	Тула (4872)33-79-87
Благовещенск (4162)22-76-07	Краснодар (861)203-40-90	Пермь (342)205-81-47	Тюмень (3452)66-21-18
Брянск (4832)59-03-52	Красноярск (391)204-63-61	Ростов-на-Дону (863)308-18-15	Ульяновск (8422)24-23-59
Владивосток (423)249-28-31	Курск (4712)77-13-04	Рязань (4912)46-61-64	Улан-Удэ (3012)59-97-51
Владикавказ (8672)28-90-48	Курган (3522)50-90-47	Самара (846)206-03-16	Уфа (347)229-48-12
Владимир (4922)49-43-18	Липецк (4742)52-20-81	Саранск (8342)22-96-24	Хабаровск (4212)92-98-04
Волгоград (844)278-03-48	Магнитогорск (3519)55-03-13	Санкт-Петербург (812)309-46-40	Чебоксары (8352)28-53-07
Вологда (8172)26-41-59	Москва (495)268-04-70	Саратов (845)249-38-78	Челябинск (351)202-03-61
Воронеж (473)204-51-73	Мурманск (8152)59-64-93	Севастополь (8692)22-31-93	Череповец (8202)49-02-64
Екатеринбург (343)384-55-89	Набережные Челны (8552)20-53-41	Симферополь (3652)67-13-56	Чита (3022)38-34-83
Иваново (4932)77-34-06	Нижний Новгород (831)429-08-12	Смоленск (4812)29-41-54	Якутск (4112)23-90-97
Ижевск (3412)26-03-58	Новокузнецк (3843)20-46-81	Сочи (862)225-72-31	Ярославль (4852)69-52-93
Иркутск (395)279-98-46	Ноябрьск (3496)41-32-12	Ставрополь (8652)20-65-13	
Казань (843)206-01-48	Новосибирск (383)227-86-73	Сургут (3462)77-98-35	
Россия +7(495)268-04-70	Киргизия +996(312)-96-26-47	Казахстан +7(7172)727-132	