DATASHEET

Gemini-4857

Isotech

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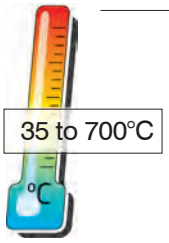


Dry Block Calibrator
Gemini

- Calibrate Large Diameter Probes
- High Capacity Blocks 64 x 160mm
- Calibrate Whole Measurement Loop

The Gemini range of Dry Blocks have high capacity allowing a large number of probes to be calibrated together. They are also suitable to accept large diameter probes with the block volume of a nominal 64 x 160mm.

Whilst the large block takes longer to heat and cool than the Jupiter it can calibrate thermocouples, resistance thermometers, thermostats and sensors that are too large for the smaller blocks.

These award winning calibrators are easy to use and are available in three versions – the Basic, the Site and the ADVANCED. The Basic has a digital display of set and nominal temperature, the Site additionally includes an in-built independent temperature indicator for a reference probe. The ADVANCED controller has inputs for reference and test thermometers with a further range of sophisticated features including automatic temperature cycling, secure data logging and full colour high resolution display.

All models include I-Cal Easy LOG software and the ADVANCED models additionally include software to manage logged data and configure the unit, see page 14 for more details.

Available with a fixed block with four 8mm and four 19.5mm pockets or the LRI version which has a removable block. With the LRI model, blocks can be drilled to custom configurations.

Isotech is a world leader in temperature calibration, providing many nations with their Primary Standards and operates a full scale UKAS accredited calibration laboratory. We can offer a range of calibration options to meet your requirements.

These models meet the calibration capacity requirements of EURAMET calibration Guide 13 “EA Guidelines on the Calibration of Temperature Block Calibrators”

ADVANCED

SITE

BASIC

Parameter	Model: Gemini 4857	
	550	**700**
Temperature Range	35°C to 550°C	50°C to 700°C
ADVANCED Range		
Absolute Stability over 30 mins	±0.01°C @ 100°C | ±0.015°C @ 300°C | ±0.03°C @ 550°C	
Display Resolution	0.01°C over whole range	
Accuracy: RTD Input Channel	±0.20°C across range	
Accuracy: Thermocouple Input Channel	E,J,K,N: ±0.2°C @ 660°C R: ±0.6°C S: ±0.7°C @ 660°C T ±0.2°C @ 150°C	
CJC Accuracy	±0.35°C	
BASIC/SITE Range		
Absolute Stability over 30 mins	±0.02°C @ 50°C | ±0.03°C @ 250°C | ±0.04°C @ 550°C	
Display Resolution	0.01°C from 30.00 to 99.99°C then 0.1°C: 0.01°C Over PC Interface	
COMMON Specifications		
Display Accuracy [1]	0.5°C	
Cools from 550°C to 275°C *from 550°C to 60°C*	35 mins (LRI: 132 mins) 345 mins (LRI: 420 mins)	- -
Heats from 30°C to 550°C *from 50°C to 700°C*	35 mins (LRI: 60 mins) -	- 110 mins (LRI: 120 mins)
Best Performance	See Graph	
Calibration volume	65mm diameter x 160mm deep	
Indicator units	°C, °F, K	
Voltage	115Vac or 230Vac 50/60Hz	
Power	600 Watts (LRI: 1000 Watts)	
Dimensions	384H (including handle) x 212W x 312D mm	
Weight	8.5kg	14kg

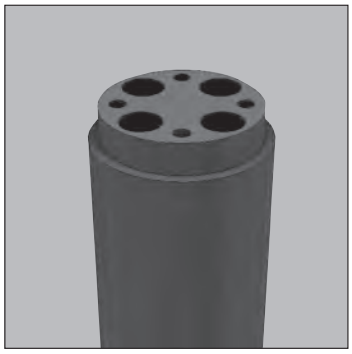
(1) Dry Block Mode only: Comparing 6.5mm Well to Display Value.

	ADVANCED	SITE	BASIC
Digital Display of Set and Nominal Block Temperature	Yes	Yes	Yes
PC Interface	Ethernet + USB Host	Serial	Serial
Test Thermostats	Yes - Two Inputs	Yes - Single Input	No
Independent Temperature Indicator for Reference Probe	Yes	Yes	No
Additional Inputs for Units Under Test	Up to 3: Two universal inputs for PRT, Thermocouple or Process inputs and a further Thermocouple input	No	No
Automatic Temperature Cycling	Yes	No	No
Data Logging	Yes - Export to USB	No	No
Offset Elimination	Yes - block can follow reference input	No	No
Choose English, French, Italian or Spanish Language	Yes - on full colour display	No	No
In Built Web Server	Yes	No	No
Tamper Proof Data	Yes - Suitable for life science, automotive and aerospace applications	No	No

UKAS Calibration available for these systems - *International Traceability - Best Practice* See page 14

ISOTECH

Dry Blocks
LARGE VOLUME



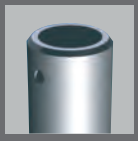
Gemini
Fixed Block

Four 8mm Pockets
Four 19.5mm Pockets

Gemini LRI
Removable Block

Eight 8mm Pockets
Can be custom drilled

Gemini Accessories

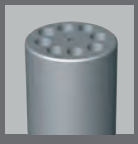


Metal Block Sleeves
Gemini 550
Set of four Sleeves to suit the block. Optional single hole sizes 4, 6, 8, 10, 12, 14mm diameter all 150mm deep.
857-07-01 Undrilled sleeves for local machining.
857-07-03 1 sleeve with 2 holes 4.5mm x 150mm deep.

Gemini 700
Set of four Sleeves to suit the block. Optional single hole sizes 4, 6, 8, 10, 12, 14mm diameter all 150mm deep.
857-07-02 Blank sleeves for local machining.
857-07-04 1 sleeve with 2 holes 4.5mm x 150mm deep.

Note: The use of sleeves will introduce an additional thermal gradient into the block. This can be avoided by using the LRI model with a block drilled for specific probes.

Removable Inserts



Gemini 550 LRI
976-07-01a Included as Standard Removable insert with eight 8mm pockets
976-07-01b Blank Insert Insert without pockets for local machining
976-07-01c Custom Insert Contact Isotech with your requirements

Gemini 700 LRI
976-07-02a Included as Standard Removable block with eight 8mm pockets
976-07-02b Blank Insert Insert without pockets for local machining
976-07-02c Custom Insert Contact Isotech with your requirements

Calibration
Includes three point traceable calibration certificate for block temperature

UKAS Calibration
Recommended: Options for block temperature and reference thermometer inputs (simulation). Legally traceable in more than 70 countries.

Current Loop Interface
935-06-161 24VDC Power Supply and Terminal Box. Powers 4-20mA Current Transmitters with 4mm terminal posts for easy connection.

Standard Probe
935-14-72/DB Platinum Resistance Thermometer for use up to 650°C.

935-14-63 Type N Thermocouple for use up to 700°C.

Carrying Case
931-22-111 - Gemini 550 / 700
931-22-112 - Gemini 550 LRI / 700 LRI
Sturdy case with room for accessories. Features wheels and pull out handle.

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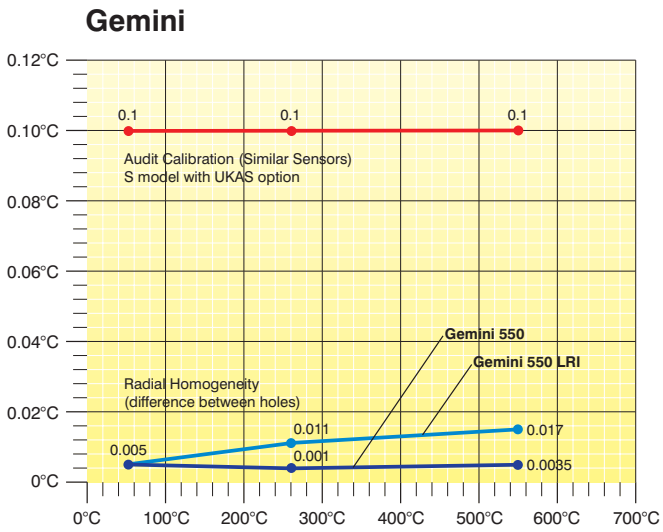
The world's leading National Metrology Institutes choose Isotech - shouldn't you?

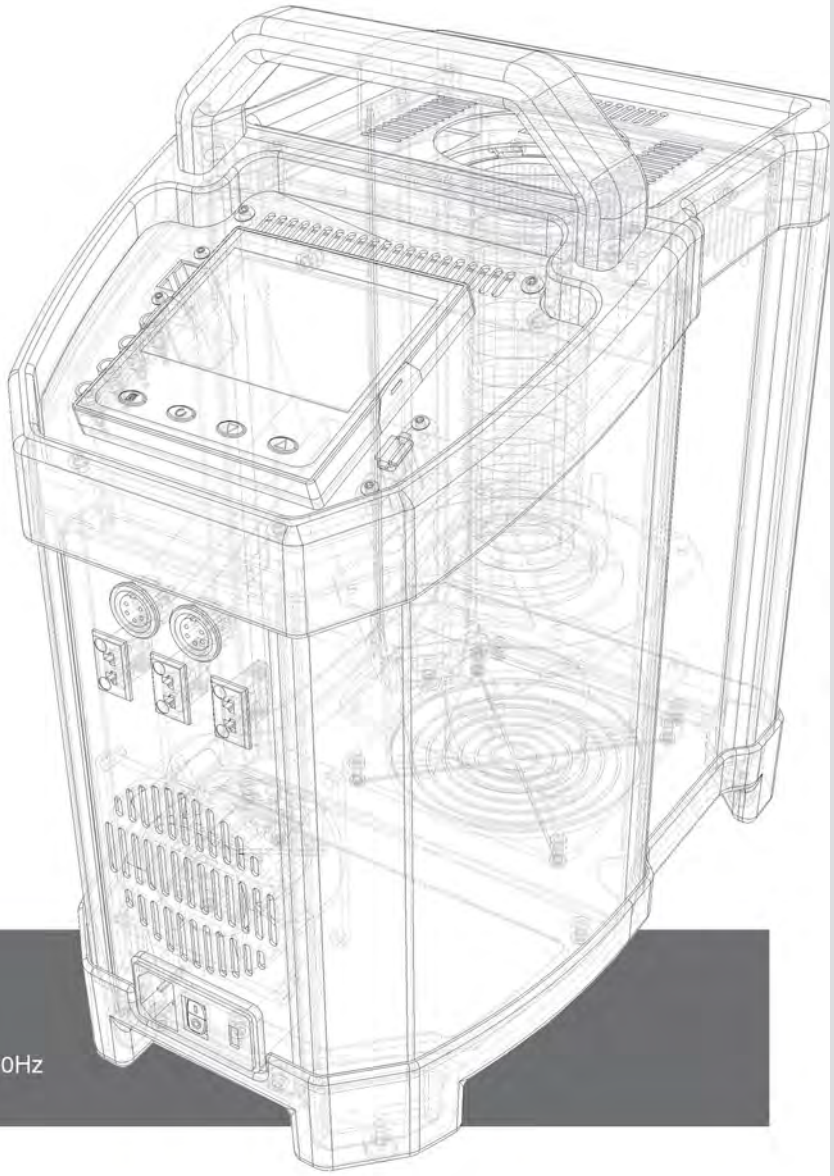
Isotech manufacture the widest range of temperature calibration equipment from hand held thermometers to Primary Standards. With Isotech solutions you can expand your equipment no matter what the requirement.

Isotech have been pioneering the latest developments in Temperature Metrology for more than 30 years, benefit from our know how, experience and global network.



Gemini Benefits

- The Gemini has a large block with sufficient mass to accommodate larger sensors or a larger number of sensors. The fixed block has four 19.5mm pockets and four 8mm pockets.
- The LRI model with its removable block can be custom drilled. Whilst the larger block takes longer to heat than the fast response models they do allow larger probes to be accommodated and can be used with custom blocks to simulate applications, allowing probes that would otherwise be unsuitable for Dry Block calibration to be evaluated.



How To Order

1 - Select Desired Options and Accessories
2 - Supply Voltage:
Specify either 115Vac 50/60hz or 230Vac 50/60Hz

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