DATASHEET

Model-787

Isotech

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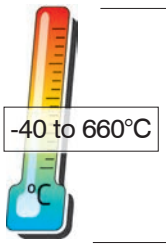

Rugged Temperature Calibrators
Model 786 & 787

Low Temperature Rugged Calibrator

Low & High-Temperature Calibration Without Compromise

The Model 786 (-40°C to +140°C) excels in cold rooms, freezers, and sub-zero environments, maintaining accuracy where others fail. Its active environmental control ensures performance in extreme cold. The Model 787 calibrates up to 660°C, ideal for aerospace, automotive, and manufacturing industries. Both models offer exceptional stability and reliability.

Built for Portability & Durability

Encased in an IP56-rated shell, they resist dust, moisture, and impact. A removable lid provides secure accessory storage. Designed for rugged use, they withstand rough transit, vibration, and tight spaces, ensuring reliable field performance.

Precision & Efficiency

Both models offer Basic, Site, and ADVANCED interfaces for fast, responsive calibration. Features include:

- High accuracy and speed
- Rugged IP56 enclosures for harsh environments
- Military-grade durability
- Portable, self-contained design with accessory storage
- Advanced data logging and reference input

From extreme cold to high heat, the Model 786 and 787 deliver unmatched accuracy, efficiency, and reliability.

High Temperature Rugged Calibrator

Parameter	Model	
	786	**787**
Temperature Range	-40°C to +140°C	+35°C to +660°C
ADVANCED Range		
Stability	±0.008°C	±0.03°C
Display Resolution	0.01°C over whole range	0.01°C over whole range
Input Channel Accuracy: Thermocouple	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	
Input Channel Accuracy: RTD	±0.1°C across range	±0.2°C across range
BASIC / SITE Range		
Stability	±0.01°C	±0.03°C to ±0.05°C
Display Resolution	0.01°C from -19.99°C to 99.99°C then 0.1°C (0.01°C over PC Interface)	0.01°C from 0.00°C to 99.99°C then 0.1°C (0.01°C over PC Interface)
COMMON Specifications		
Display Accuracy	0.15°C	±1°C (500°C) ±2°C (650°C)
Radial Uniformity	<0.008°C	<0.08°C
Axial Uniformity	<0.09°C	<0.5°C
Heating Time	See Graph	See Graph
Cooling Time	See Graph	See Graph
Ingress Protection	IP56 - *With Lid Fitted*	
Storage Temperature	-30°C to +71°C	
Humidity	0 to 90% (non-condensing)	
Insert Dimensions	29.4mm Diameter x 203mm Deep	25.4mm Diameter x 152mm Deep
Insert Pockets	4.50mm, 6.50mm, 8.00mm, 9.50mm, all 195mm deep, M4 tapped hole for supplied extractor tool.	4.50mm, 4.50mm, 6.50mm, 8.00mm, all 148mm deep, M4 tapped hole for supplied extractor tool.
Power	85-264 Vac, 50/60Hz, 360 Watts	110 or 230 Vac, 50/60Hz, 800 Watts
Dimensions	H 350mm W 400mm D 275mm	
Weight (nominal)	16.8kg	18kg

	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

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Rugged Calibrators for **Harsh Environments**

At Isotech we appreciate that operating in challenging environments often necessitates tools that can endure harsh conditions. **These rugged calibrators were designed (to US Navy specifications,)** where a range of custom dry block temperature calibrators, constructed to military standards, and capable of operation even when the ambient temperature was well below 0°C.

Rising to this challenge, and outperforming all international competitors, we developed what we believe to be the World's most rugged Dry Block Calibrator. Our efforts and commitment were well-rewarded, the Navy has already procured hundreds of these calibrators and their continued trust in our design emphasise the quality and reliability of our products.

Recognizing the potential benefits for a broader audience we have made these rugged, precision units available for general use, featuring our standard interface options, with capabilities to suit a wider range of industries.

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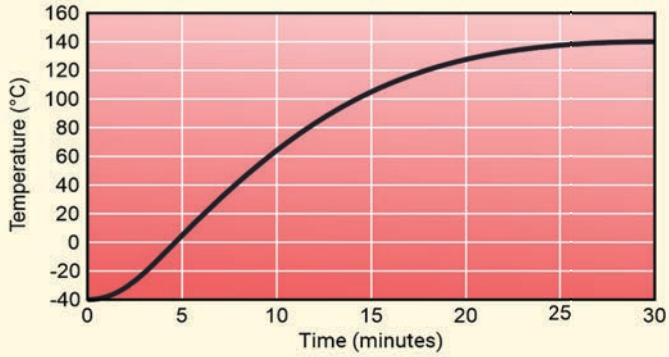
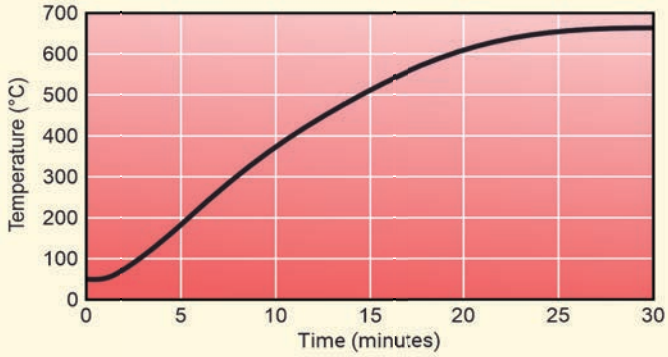
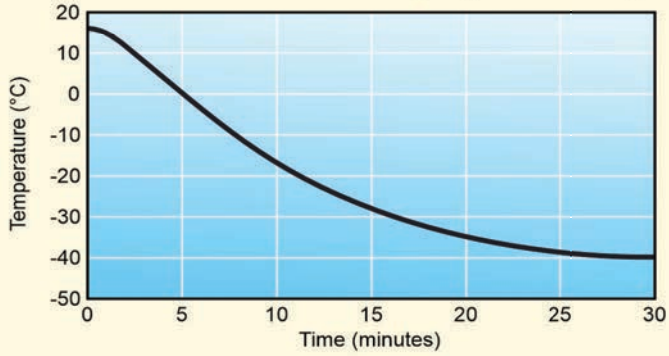
786 Heat Up Graph (-40°C to 140°C)



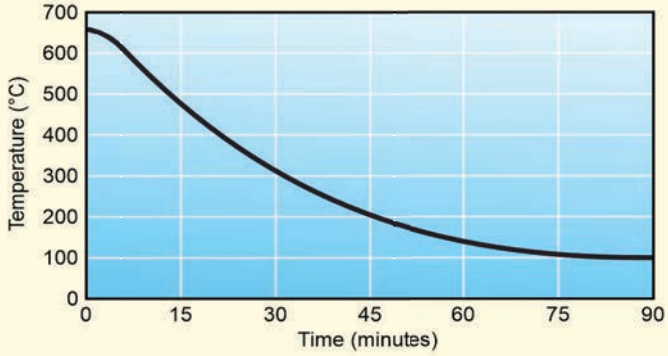
787 Heat Up Graph (35°C to 660°C)



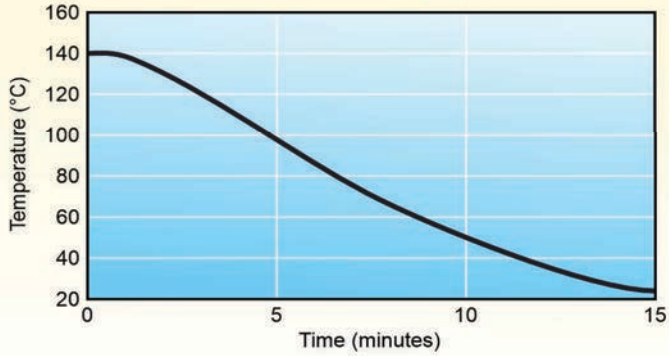
786 Cool Down Graph (15°C to -40°C)



787 Cool Down Graph (660°C to 100°C)



786 Cool Down Graph (140°C to 20°C)



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