DATASHEET

Model-547

Isotech

Distributed by AKRIBIS

Thermocouple Calibration Furnace
Model 547

- High Accuracy Thermocouple Calibration
- Calibrates both Laboratory & Industrial Thermocouples
- Options for Blackbody Calibration

The Model 547 is the professional solution for accurate and contamination-free temperature calibration, designed to meet the needs of professionals in a wide range of industries, from industrial to laboratory.

The furnace can be equipped with a blackbody target, making it ideal for calibrating infrared thermometers. For even higher accuracy, it also offers the option to use blackbody cells, ensuring ultimate precision and lowest calibration uncertainties.

The Model 547 is also designed to accommodate open-ended multi-zone thermocouples, making it an ideal choice for calibration professionals in the semiconductor industry.

With a focus on safety and convenience, the Model 547 has been “designed by metrologists for metrologists”.

When used in combination with our companion products for checking thermocouple homogeneity, laboratory standard thermocouples, cold/reference junction equipment, and software to automate thermocouple calibration, it is a complete solution for all your temperature calibration needs, that no other company can rival.

Invest in the Model 547 Thermocouple Calibration Furnace and experience the ultimate in temperature calibration accuracy and convenience.

Wide Temperature Range
Operates efficiently from 200°C to 1200°C with exceptional stability and uniformity.

Versatile Calibration Options
Suitable for various thermocouple types, including laboratory standards and industrial sensors, with support for infrared thermometer calibration using blackbody targets.

Advanced Calibration Corrections
Switchable correction curves for deep and short immersion calibrations. Customise up to 16 correction points per immersion type, ensuring precise calibration across the full range. This feature improves accuracy and flexibility for all calibration requirements.

Rapid Heating and Cooling
Heats from 50°C to 1200°C in just 45 minutes and cools from 1200°C to 300°C in 90 minutes.

Automated Calibration Capability
Expandable for automated processes with software integration, allowing for efficient and precise calibration management.

User-Friendly Interface
Features a 4.5” touchscreen display for easy control and advanced three-zone temperature regulation.

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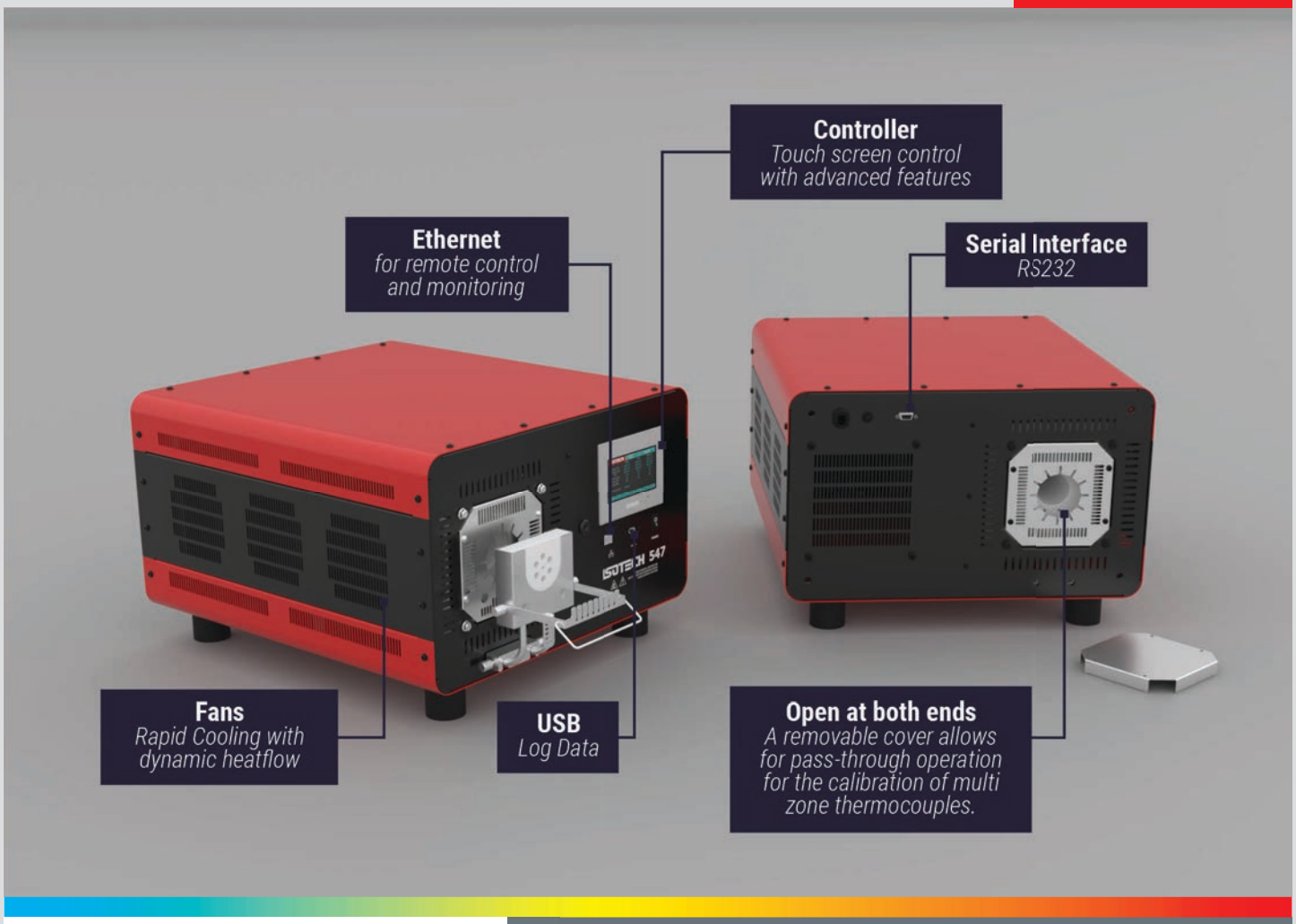

Model	547
Temp Range	200°C to 1200°C
Stability	<0.08°C over the entire range
Uniformity	@200°C ±0.2°C @1200°C ±0.3°C
Display	4.5” Touchscreen
Display Resolution	0.1°
Heating Time	50°C to 1200°C in 45 minutes
Cooling Time	1200°C to 300°C in 90 minutes
Calibration Volume	46mm diameter x 450mm deep
Minimum Immersion	180mm
Interface	Ethernet, Serial (RS232), USB Host
Power	3kW
Dimensions	W510mm x H325mm x L660mm
Weight	55kg

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Model 547 - Accessories (Inserts)

Choice of Alumina or Metallic Inserts

Alumina: metal free inserts - avoid contaminating laboratory standard thermocouples

Metal: high temperature alloy inserts for high capacity industrial sensor calibration

Inserts with Sensor Pockets or Through Holes

Drilled with Sensor Pockets: for calibrating laboratory standard and industrial sensors

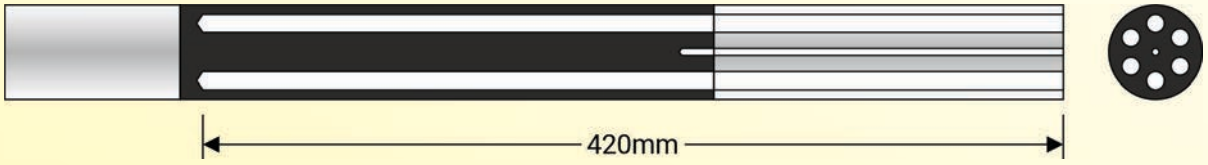
Drilled with Through Holes: for calibrating multi zone thermocouples

Metallic Insert	547-07A	547-07B	547-07C	547-07D
Insert Diameter	45mm	45mm	45mm	Custom Insert Please Specify
Insert Length	130mm	260mm	260mm	
Insert Type	Sensor Pockets	Sensor Pockets	Through Holes	
Holes	6 x 8mm holes	6 x 8mm holes	6 x 8mm holes	

Ceramic Insert	547-07E	547-07F	547-07G	547-07H
Insert Diameter	45mm	45mm	45mm	Custom Insert Please Specify
Insert Length	130mm	260mm	260mm	
Insert Type	Sensor Pockets	Sensor Pockets	Through Holes	
Holes	6 x 8mm holes	6 x 8mm holes	6 x 8mm holes	

Short Insert

Long Insert



Drilled Through Insert

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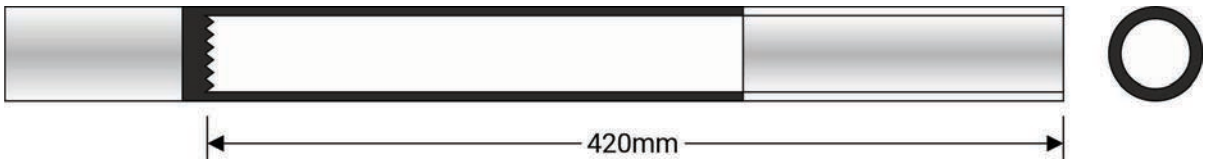
Model 547 - Accessories (Blackbody)

Infrared Thermometer Calibration

Calibrate Infrared Thermometers using the options of Blackbody Target or Blackbody Fixed Point Cells

Blackbody Target	547-07I
Target Diameter	45mm
Target Length	273mm
Aperture	Standard

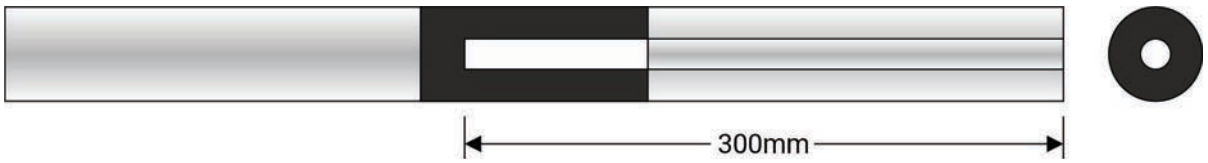
Blackbody Target



Blackbody Cell	547-07J	547-07K	547-07L
Cell Type	Zinc	Aluminium*	Silver*
Temperature	419.527°C	660.323°C	961.780°C
Aperture	10mm	10mm	10mm

* These cells are required to be surrounded by gas for protection at higher temperatures, see Model 984

Blackbody Cell (Zinc / Aluminium / Silver)



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