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THE WORLD'S MOST ADVANCED THERMAL TESTING EQUIPMENT

PROTECTIVE TEST SYSTEM - ACCESSORIES COPPER CALORIMETERS

Our copper calorimeter sensors for the TPP, RPP, CCHR, and other thermal protection test devices are key to accurate energy exposure predictions.

A copper calorimeter sensor measures the temperature rise in a thermally insulated slug to determine heat transfer rates for a wide range of applications, including radiant and convective heat flux.

Each sensor includes a weight plate and removable thermocouple extension wire and is calibrated per the methods of ASTM E457 using a Thermetrics calibration assembly. The exposure is controlled via a precisely timed shutter using standard laboratory ambient conditions.



Test Methods Supported

- **TPP Sensors:** ASTM F2700, F2703, ISO 17492, NFPA 1971, 1977, 2112
- **RPP Sensors:** ASTM F1939, F2702, NFPA 1971, 1977
- **CCHR Sensors:** ASTM F1060, NFPA 1971

Other sensors available upon request - ASTM D7140, ASTM D4108, etc.





Copper Calorimeters Specifications

Copper Slug - made of oxygen free high conductivity copper

- Copper Weight: 18 g +/- 0.01 g
- Copper Diameter: 1.574 in +/- 0.004 in (40.00 mm +/- 0.10 mm)
- Copper Area: (12.57 +/- .07 cm²)
- Copper Thickness: 0.063 in +/- 0.001 in (1.6mm +/- 0.025 mm)
- Calorimeter Absorptivity: 0.92 to 0.95
- Assembly Mass: 1000 g +/- 10.0 g

Thermocouple Wire

- Thermetrics sensors are J-Type, built using 32 AWG SLE thermocouple wire. 32 AWG wire produces a faster response time than the more common 30 AWG wire and continues to satisfy the test standard (which requires 30 AWG or smaller)
- A mating J-Type thermocouple extension cable is included (we provide two options: a 5-foot coil type with one standard and one male mini connector, or a straight 6-foot length with two male mini connectors)

Insulation Block

- Insulation block is non-combustible, dust-free and contains no asbestos, mercury or lead

Copper Calorimeters Highlights & Benefits

- Sensor dimensions are compliant with ASTM guidelines to be interchangeable across all models and manufacturers of TPP and RPP devices
- Precisely calibrated per known methods using ISO 17025 practices
- Engineered to be durable and accurate while still meeting current requirements
- Copper slugs are machined to precise weight (+/-0.01 grams) and dimensional (12.57 +/- .07 cm²) tolerances
- Thermetrics maintains a standard inventory of TPP and RPP calibrated sensors available for immediate delivery

512 - Protective Test System - Accessories - Copper Calorimeters	Item #	Description	Product Name
Standard Base Product	20-00444	Calorimeter Sensor Assy, RPP, ISO	512-XXX
	20-00619	Calorimeter Sensor Assy, TPP, ISO	512-XXX
	20-00621	Calorimeter Sensor Assy, TPP, ASTM/ISO, 1 Thermocouple	512-XXX
	20-00646	Calorimeter Sensor Assy, RPP, ASTM	512-XXX
	20-00672	Calorimeter Sensor Assy, CCHR	512-XXX
	20-00760	Calorimeter Sensor Assembly, ASTM D7140	512-XXX
	20-00759	Calorimeter Sensor Assembly, ASTM D4108	512-XXX

 Don't see what you need above? Contact Thermetrics to customize your perfect system.

Keep your copper calorimeters in tip-top shape. Discuss service plan options and point-of-sale discounts with us at sales@thermetrics.com.