

TCi Accessories



Tenney Jr. Thermal Chamber

The TCi offers users the flexibility to operate the sensor in various environmental enclosures (including thermal chambers and glove boxes). C-Therm recommends the Tenney Jr. Thermal Chamber and offers the product as an available accessory with the TCi Thermal Conductivity Analyzer. The thermal chamber can be controlled through the TCi software.

Temperature Range: -73°C to 200°C

Interior Dimensions W x D x H (inches): 16 x 11 x 12

Exterior Dimensions W x D x H (inches): 37 x 22.5 x 30.7

Crating Dimensions W x D x H (inches): 47 x 33 x 41

Cabinet Type: Standard Door

Electrical Power: 115V-120V 1 Phase 60 Hz

Amp Draw: 16

KW: 0.5 kW



TCi Compression Test Accessory (CTA)

The Compression Test Accessory (CTA) is engineered and designed to enable users to precisely control the level of compression or compaction of a sample in characterizing the material's thermal conductivity. The CTA is ideal for applications in the fields of advanced textiles, fabrics and thermal interface materials (TIMs) where representative thermal conductivity data requires precise control over the sample's compaction. The CTA is compatible with solids, pastes, greases and powder sample formats.



Modified Transient Plane Source (MTPS) Sensor

Suitable for testing solids, liquids, powders, and pastes. The MTPS sensor offers "Plug & Play" thermal conductivity characterization.

Construction

- Sealed against dust and liquids by a RTV silicone sealant between housing and sensor chip
- Housing is made of stainless steel
- Chip surface is made of alumina (96% aluminum oxide) with a thin sealing glass layer

Environmental – Operating

Operating temperature range for sensor head: -50°C to +200°C (with option to extend to 500°C)

Note: Sensor does NOT heat sample beyond a couple of degrees.

Relative humidity: up to 95% non-condensing

External: vacuum to 6 Atm (90 PSIG)

Calibration

- Sensor is factory calibrated and provided in "Plug & Play" format.
- Calibration data is stored on sensor's ID chip in sensor connector.
- Calibration data is verified prior to sensor operation with standard reference materials.
- Sensors are interchangeable and field replaceable.



TCi Small-Volume Liquids Test Cell

Your perfect accessory for testing liquids. The Small-Volume Liquids Test Cell was originally developed with the US Navy Surface Warfare Division specifically for testing energetic emulsions and powders. The effectiveness of the accessory in reducing convection effect on testing samples make it ideal for characterizing the thermal conductivity of liquid samples regardless of the viscosity. The Liquids Test Cell is commonly applied in testing nano and heat transfer fluids, as well as emulsions. (**Note:** does not include sensor or sensor base - sold separately.)



Transient Line Source (TLS) Needle Probe Sensor

C-Therm TLS sensors are suitable for testing a wide range of materials including plastic resins, melts, slurries, pastes, paints, thermal interface materials, foodstuffs, powders and soils.

Test method: Transient Line Source (TLS)

Standards: [ASTM D5334](#), [D5930](#) and [IEEE Std 442-1981](#)

Needle lengths: 150 mm and 70 mm

Thermal Conductivity Range: 0.1 to 6 W/m.K

Temperature Range for Needle: -55 to +200 °C

Accuracy (@ 20 °C): $\pm (3\% + 0.02)$ W/mK