



MP-2 Meter

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PART NUMBER: 30101P001-00

MP-2

Measurement Platform 2 - Thermal Conductivity Advanced portable meter with unique selection of thermal conductivity sensors for a variety of applications, with focus on primary measurements. Each sensor type is auto recognized when connected, allowing the meter to automatically change measurement settings.

Optional Thermal Conductivity Sensors:

TPS-4 Single-Sided (MTPS) Sensor

Property	Thermal Conductivity
Method	Transient Plane Source
Materials	Solids, Paste and Powders

THW-L3 Sensor (40 mm)

Property	Thermal Conductivity
Standards	ASTM D7896-19
Materials	Liquids, Paste

TLS 50 mm

Property	Thermal Conductivity
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Standards	ASTM D5334, IEEE 442-1981
Materials	Concrete, Rocks, Polymers

TLS 100 mm

Property	Thermal Conductivity
Standards	ASTM D5334, IEEE 442-1981
Materials	Soil, Polymers

TLS 150 mm

Property	Thermal Conductivity
Standards	ASTM D5334, IEEE 442-2017
Materials	Soil, Polymers

TPS-EFF Sensor (30 mm)

Property	Thermal Effusivity
Materials	Solids, Liquids, Paste & Powders

Specifications:

Onboard Smart Thermal Conductivity Software
 Auto-test Scheduling
 Temperature Recording
 Raw-data Recording
 Powered by Battery or USB
 Manual and Power Cable
 Desktop Utility for download - export to excel

Includes:

MP-2 Controller
 4x Lithium-Ion Batteries
 USB with User Manual
 USB Cable for Exporting Results



PART NUMBER: 30401P001-00

TPS-4 (MTPS) Sensor Asymmetric Sensor (12.8 mm)

The asymmetric transient plane source (TPS) for testing the thermal conductivity of solids, paste and powders.

Specifications:

Thermal Conductivity Range (W/m•K)	0.03 to 20
Temperature Range (°C)	0 to 80
Accuracy	Typically $\leq 5\%$
Reproducibility	Typically $\leq 2\%$
Smallest Sample	25 mm diameter or square x 5 mm
Largest Sample	Unlimited

Includes:

TPS Sensor

Verification Material

PART NUMBER: 30404P001-00

Powder/Paste Adaptor

Powder – Paste cell for use with TPS-4 Sensor.

Specifications:

25 mm diameter

Includes:

Powder – Paste Cell



PART NUMBER: 28302P001-00

THW-L3 Sensor (40mm) Kit

The THW-L3 (40 mm) Sensor is ideal for liquids and pastes.

Specifications:

Thermal Conductivity Range (W/m•K)	0.01 to 1
Temperature Range (°C)	0 to 80
Accuracy	Typically $\leq 5\%$
Reproducibility	Typically $\leq 2\%$
Smallest Sample	15 mL
Largest Sample	Unlimited

Includes:

THW-L3 (40 mm) Sensor

THW Sample Cell (Teflon)

Replacement Wire

Solder

Calibration Liquid - DIUF Water (15 mL)



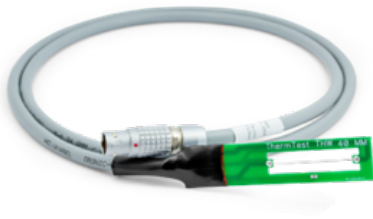
PART NUMBER: 28301P002-00

THW L-3 Sample Cell

THW-L3 sample cell for use with the THW-L3 Sensor for measuring liquids, pastes, or powders.

Includes:

THW-L3 Sample Cell (Teflon) and Aluminum Base



PART NUMBER: 28301P005-00

THW L-3 Sensor (40mm)

The THW-L3 (40 mm) Sensor is ideal for liquids, pastes, and powders.

Specifications:

Thermal Conductivity Range (W/m•K)	0.01 to 1
Temperature Range (°C)	0 to 80
Accuracy	Typically $\leq 5\%$
Reproducibility	Typically $\leq 2\%$
Smallest Sample	15 mL
Largest Sample	Unlimited
Standards	ASTM D7896-19

Includes:

THW-L3 (40 mm) Sensor

Replacement Wire

Solder

Calibration Liquid - DIUF Water (15 mL)



PART NUMBER: 28001P005-00

THW Sensor Wire Replacement Kit

Replacement kit that includes everything that is needed to properly replace the THW Sensor wire.
For use with THW-L3.

Includes:

10x THW 60 mm Sensor Wire

Solder

Replacement instructions



PART NUMBER: 24001P002-00

TPS-EFF Sensor

TPS-Effusivity Sensor is used for testing the warmth or coolness of fabrics and textiles.

Specifications:

Thermal Effusivity Range ($Ws^{1/2}/m^2K$)	35 to 1700
Min Sample Size	35 mm Diameter
Maximum Sample Size	Unlimited
Accuracy	5%
Repeatability	2%
Test Times	2 and 10 seconds
Direction of Thermal Effusivity	(1-D) Through-thickness
Temperature Range ($^{\circ}C$)	-10 to 50
Moisture Range	0 to 90%
ASTM Standard	D7984-16

Includes:

TPS Single-sided Sensor

Verification Materials

Brass Weight

PART NUMBER: 24001P015-00

TPS-EFF Replacement Sensor Plug

Replacement sensor and cap for the TPS-EFF sensor.

Specifications:

Sample Size: 30 mm Diameter

Includes:

Sensor with Foam Backing

Note:

- Sensor Plug is used for replacement of the sensor, fitting into the existing sensor unit.



PART NUMBER: 24001P020-00

TPS-EFF Powder Adaptor

TPS-EFF powder adaptor is used for testing the effusivity of powders or sand.

Includes:

Powder Adaptor that fits over TPS-EFF Sensor

Weight



PART NUMBER: 27102P002-00

TLS Needle 50mm

The TLS 50 mm needle is used to test rigid materials like rock or concrete. The needle's shorter length and larger diameter is optimized for easy drilling, making sample preparation easy.

Specifications:

Materials	Rock and Concrete Samples
Thermal Conductivity (W/m•K)	0.3 to 5
Thermal Resistivity (m•K/W)	0.2 to 3.3
Repeatability	Typically better than 2%
Accuracy	Typically better than 7%
Temperature Range (°C)	-40 to 100
Measurement Time	90 seconds
Smallest Sample Dimensions	50 mm in length, 50 mm Diameter
Largest Sample Size	Unlimited

Includes:

TLS Needle: 50 mm x 4 mm

TLS Verification Material

Notes:

- Requires heating - cooling apparatus for complete temperature range.



PART NUMBER: 27102P001-00

TLS 50mm Rock Needle Kit

The TLS Rock Needle Kit comes with the 50 mm needle, which is used to test rigid materials like rock or concrete. The shorter needle length and larger diameter is optimized for easy drilling, making sample preparation easy.

Specifications:

Materials	Rock and Concrete Samples
Thermal Conductivity (W/m•K)	0.3 to 5
Thermal Resistivity (m•K/W)	0.2 to 3.3
Accuracy	7% within specified range
Reproducibility	Typically 3%
Smallest sample	50 mm diameter x 60 mm height
Largest Sample	Unlimited

Includes:

- 50 mm Rock/Concrete TLS Needle
- TLS Verification Sample
- 2x Masonry Drill Bits for drilling samples
- 1x Thermal Paste



PART NUMBER: 27103P001-00

TLS Needle 100mm

Transient Line Source (ASTM D5334) Sensor

Specifications:

Materials	Soils, Pastes, Powders, & Solids
Thermal Conductivity (W/m•K)	0.1 to 5
Thermal Resistivity (m•K/W)	0.2 to 10
Repeatability	Typically better than 2%
Accuracy	Typically better than 5%
¹ Temperature Range (°C)	-40 to 100
Measurement Time	90 seconds
Smallest Sample Dimensions	100 mm in length, 50 mm Diameter
Largest Sample Size	Unlimited
Standard	ASTM D5334-22a

Includes:

TLS Needle: 100 mm x 2 mm

TLS Verification Material

Notes:

- Requires heating - cooling apparatus for complete temperature range.



PART NUMBER: 30102P010-01

TLS 100mm Soil Needle Kit

TLS 100 mm Soil Testing Kit

Specification:

Thermal Conductivity Range (W/m•K)	0.1 to 5
Thermal Resistivity Range (m•K/W)	0.2 to 10
Temperature Range (°C)	-40 to 100
Accuracy (%)	≤5
Reproducibility (%)	Typically ≤2
Smallest Sample [Diameter or Square x Thickness] (mm)	50 x 100
Largest Sample	Unlimited
Standard	ASTM D5334-22a

Includes:

TLS Needle 100 mm

100mm Needle Sheath

Polymer QA Serial Number

TLS Verification Material

1 Jar of Thermal Paste (2 oz)

1 Poker Kit which Includes: 1x 130mm poker; 1x long drill bit; 1x short drill bit; 3x sleeves



PART NUMBER: 27104P001-00

TLS Needle 150 mm

Transient Line Source (ASTM D5334, IEEE 442-2017) Sensor

Specification:

Materials	Soils, Pastes, Powders, and Solids
Measurement Capabilities	Bulk Properties
Thermal Conductivity Range (W/m•K)	0.1 to 3
Thermal Resistivity Range (m•K/W)	0.2 to 10
Measurement Time	3 min
Accuracy	≤5%
Reproducibility	Typically ≤2%
Temperature Range	-40 to 100
Smallest Sample	150 mm in Length, 50 mm Diameter
Largest Sample	Unlimited
Standards	ASTM D5334-14, IEEE 442-2017

Includes:

TLS 150 mm Needle
TLS Verification Sample

Notes:

- Requires heating - cooling apparatus for complete temperature range.



PART NUMBER: 27002P006-00

TLS Needle Sleeves

Metal sleeves can be placed into curable material such as cement for easy testing. The needle can then be inserted with no further hole preparation required. Since these sleeves are thin and have a high thermal conductivity, using them does not affect your measurements.

Includes:

5x TLS Needle Sleeve



PART NUMBER: 120-2

TLS Thermal Paste

Paste is used to reduce the contact resistance between the TLS needle and a solid sample.

Includes:

1 Jar of Thermal Paste (2 oz)



PART NUMBER: L91

TLS Batteries (AA Lithium 4 pack)

Energizer lithium AA batteries are the recommended batteries to be used with the TLS.

Includes:

TLS Batteries (AA Lithium 4 pack)

Notes:

- Using batteries other than these could affect the performance of the TLS.

Macor Verification Materials:

Macor ceramic verification materials for TLS needles. Thermal conductivity is around 1.55 W/m•K.

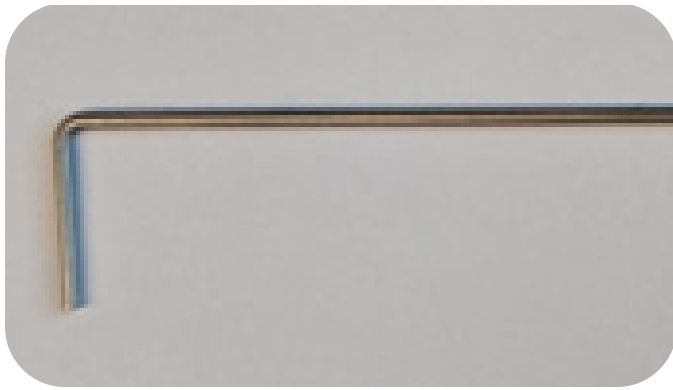
Includes:

TLS (Macor Standard A)

TLS Verification Sample 50 mm (Macor Standard A)	27006P007-00
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TLS Verification Sample 100 mm (Macor Standard A)	27007P005-01
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TLS Verification Sample 150 mm (Macor Standard A)	27104P003-01
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PART NUMBER: 27001P004-00

TLS Poker

When conducting tests with the TLS Needle 100mm the TLS Poker is used to prepare holes in soft materials such as soil and sand. This prevents any potential damage to the needle caused by inserting it straight into the sample.

Includes:

5x TLS Poker



PART NUMBER: 1-043-4500

TLS Drill Bit 100 mm (x5) (#45 PTD Taper Length)

Drill bit to be used to make holes for the TLS Needle 100mm. With this drill bit you can drill a 108 mm hole in a sample, the perfect length for the 100 mm needle.

Includes:

5x TLS Drill Bit 100 mm (#45 PTD Taper Length)



PART NUMBER: 1-070-4500

TLS Drill Bit 100 mm (x5) (#45 6" Aircraft)

Drill bit to be used to make holes for the TLS Needle 100mm. With this drill bit you can drill a 152 mm hole in a sample, this is used for drilling holes all the way through samples for easy insertion of the needle, and easy cleaning of the sample.

Includes:

5x TLS Drill Bit 100 mm (#45 6" Aircraft)



PART NUMBER: 8897A22

TLS Drill Bit 50 mm (x5 Round Shank, $\frac{5}{32}$ \"/>

Drill bit to be used to make holes for the TLS Needle 50mm.

Includes:

5x TLS Drill Bit 50 mm (Round Shank, $\frac{5}{32}$ \"/>



PART NUMBER: 27002P004-00

TLS Drill Bit Kit 100 mm

Drill bits to be used to make holes for the TLS Needle 100mm.

Includes:

1x TLS Drill Bit 100 mm (#45 PTD Taper Length)

1x TLS Drill Bit 100 mm (#45 6" Aircraft)

PART NUMBER: 3158A159

TLS Drill Bit 150 mm (Wire Gauge 45, 12" Overall Length)

Drill bit to be used to make holes for the TLS Needle 150mm.

Includes:

5x TLS Drill Bit 150 mm (Wire Gauge 45, 12" Overall Length)