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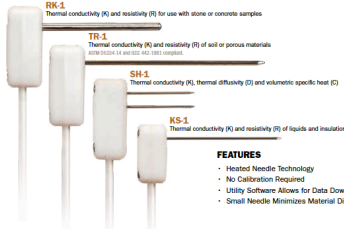
KD2 PRO

MEASURE THERMAL PROPERTIES

Measure thermal properties of soil and other materials with the KD2 Pro Thermal Properties Analyzer. The KD2 Pro has four interchangeable sensors which measure thermal conductivity, thermal diffusivity, thermal resistivity (R) and volumetric heat capacity. Over 4,000 readings can be stored manually or automatically and downloaded for analysis.

KD2 Pro comes factory calibrated and includes performance verification standards.

KD2 Pro



FEATURES

- Heated Needle Technology
- No Calibration Required
- Utility Software Allows for Data Downloads
- Small Needle Minimizes Material Disturbance

Thermal Properties of Soil Materials (T is Celsius Temperature)¹

Material	Density (g/cm ³)	Specific Heat (J/g°C)	Thermal Cond. (W m ⁻¹ °C ⁻¹)	Thermal Resistivity (m°C/W)
Soil Minerals	2.65	0.87	2.5	0.40
Granite	2.64	0.82	3.0	0.33
Quartz	2.66	0.80	8.8	0.11
Glass	2.71	0.84	1.0	1.00
Organic Matter	1.30	1.92	0.25	4.00
Water	1.00	4.18	0.56-0.6018T	1.80 at 26 °C
Air	0.92	2.1-0.0073T	2.20-0.011T	0.65 at 0 °C
Air (101 kPa)	(1.290,0041T x 10 ³)	1.01	0.024-0.00007T	38.8 at 25 °C

KD2 Pro Specifications

Measurement Time: 30 seconds to 10 minutes. **Accuracy:** ±5 to ±10% Conductivity/Resistivity, ±10% Thermal Diffusivity, ±10% Specific Heat. **Range:** K: 0.022 to 80 W m⁻¹°C⁻¹; D: 0.1 to 1.0 m²s⁻¹; R: 0.20 to 50 m°C/W; C: 0.1 to 4 MJ m⁻³°C⁻¹. **Data Storage:** 4000 readings. **Sensor Environment:** -50 to 150 °C. **Case Size:** 15.5 x 9.5 x 3.5 cm. **Power:** 4 AA Batteries Cable: 1 m.

¹Accuracy and measurement range may vary with sensor type.

¹ Campbell, C. S. and J. W. Norman, 1985. An introduction to environmental biophysics, 2nd ed. Springer-Verlag, New York.