

# Package KPP-M

## Description

The multi-use package KPP-M includes Lignometer K meter and electrodes E12, E14-V and E16.

## Applications

Used by flooring inspectors, contractors, water restoration specialists, anyone who needs to investigate moisture conditions in wood floors, drywall, roofing materials and structural elements in the building envelope. With the three electrodes E12, E14 and E16 you can choose the right tool for every moisture measurement application.

## Advantages

**Lignometer K** features Lignomat's most advanced pin measuring technology with a wide moisture range, over 150 correction settings and built-in wood temperature corrections for hot and cold lumber. Delivers outstanding reliability, great measuring accuracy and stable calibrations for all measurements.

The electrode E12 allows accurate measurements up to 2" deep in wood with insulated pins. The electrode E14-V is made for moisture investigations in buildings to measure in corners, under window sills and otherwise hard to reach problem areas. E14-V is tough enough to withstand strong pounding to insert the pins into hard materials. Electrode E16 allows measurements in hard building materials such as concrete, tile, or stone.

The **Lignometer K** incorporates reliability, calibration accuracy and ease-of-operation with individual wood species corrections, a wide measuring range 5-99% and built-in wood temperature corrections. Unsurpassed accuracy is guaranteed even in the critical range below 8%. The Lignometer K has proven to perform well in rough mill environments with day-to-day usage. A BNC connector for pin electrodes and for in-kiln, extension cables (with Adapter H) is installed in the top of the meter.

With the Lignometer K and the three electrodes you can choose the right accessories for the job on hand for fast estimates or accurate percent measurements.

The **slide-hammer electrode E12** is designed to measure wood from the surface up to 2" deep (with DB pins). All E12 pins are insulated and measure only at the tip. The slide hammer helps inserting and removing the pins. As pins are hammered into the material, consecutive readings show the moisture distribution within the material at every depth level the pins are driven to. The ability to measure a moisture gradient is one of the main reasons for our customers to use the E12.

**Wood:** Taking numerous readings as the pins are driven towards the core indicate if a moisture gradient exists or if the wood is dry throughout the core. Making sure wood is evenly dried is the best assurance for quality and stability of wood products. When inspecting wood floors, using the E12 gives you a tool to assess moisture distribution through floor planks into the sub floor without having to remove any floor planks.

**Restoration:** The moisture in structural component even behind wall coverings can be checked with the electrode E12. When assessing water damage, the pins of the E12 can be driven to different depth levels and thus indicate how far water has been absorbed or if there is still residual moisture inside the structure after drying. Insulated pins can measure dry material behind a wet surface.

**Inspector Electrode E14-V** can be used for measuring moisture on any surface up to 3/4" deep with insulated pins EG. In addition, the slim shape allows for checking places which cannot be reached with the electrode E12; around pipes, below window sills, into corners, through roof coverings. The light weight of the E14 makes it easier to obtain measurements in hard-to-reach areas. Adding the 7" long EL pins lets you reach through



Multi-use measuring kit:  
With the three electrodes E12, E14 and E16 you can always choose the right tool for every moisture measurement application.



**Pinless dual-depth mode:** fast and easy moisture checking of lumber and flat boards, wood floors, engineered products and bamboo. As well as drywall, wall boards and other building materials, engineered products, bamboo.



Slide-hammer electrode to pin-point moisture distribution from surface to core. For quality control, for restoration jobs, when installing, inspecting floors.

wall covers and insulation or under baseboards into structural components. Great for EIFS inspections. The knob at the end of the handle can be removed and replaced by a paint brush handle or broom stick. Using the paint brush handle allows to extend the reach. You can stay a safe distance from mold infested areas and still be able to get reliable measurements. Extending the handle with a broom stick makes measuring carpets and carpet padding easy without crouching down. Ceilings can be checked for moisture leakage without a ladder.

**Hard Materials:** Electrode E14-V and pins EG are very sturdy and allow hard pounding to insert the pins into hard materials. Works for strand bamboo as well as hard and cementitious panel products.

**Electrode E16:** When measuring hard materials such as concrete, it is hard to push the pins from electrode E12 or E14 into the material. Using the two separate posts of the electrode E16 make it easier to insert the pins. Pre-drilling holes may be necessary to reach the desired measuring depth.

Using the Ligno-VersaTec with electrode E16 to measure the moisture in concrete, gives immediate results in comparison to the Calcium Chloride or RH method. The measurements can show areas of high and low moisture, either when measuring different locations or when measuring with EL pins at different depth levels. However, it cannot replace the in-situ probe test or the Calcium-Chloride test which allow to determine, if a wood floor can be installed.

Measurements obtained from concrete or cementitious materials are not true percent values. They only can be used as reference numbers or comparative readings. Comparative measurements become meaningful, when a dry sample piece of the material is available. Measurements can then be compared to the moisture value obtained from the dry sample.

### Lignometer K Specifications

Size: 4.75"L X 2.5"W X 1"H

BNC connector for an assortment of external electrodes and in-kiln probes

**Measuring Range:**

- Wood: 5-99%
- Gypsum, Sheetrock, Wall Boards: 0-22%
- Reference Scale: 0-99

**Display:** Resolution: 0.1% below 10% and 1% steps above 10%, life-time warranty

**Wood Temperature Corrections:** 0°F to 210 °F or -15°C to 95°C

**Species Corrections**

- over 150 settings to correct for:
  - domestic and tropical wood species
  - bamboos, vertical, horizontal and strand
  - laminates and wood-based panel products
- 4 Scales for gypsum, drywall, wall boards (0-7.5%)
- 1 Reference Scale for building materials, for identification of moisture levels in Search and Compare Mode

**Calibration:** Stable calibrations. The calibration is internally checked by the meter before each reading and if necessary automatically adjusted. We offer an external calibration check block to verify calibration and check function of meter, cable and electrode.

**Operation:**

Push SET repeatedly to dial settings for species, wood temperature and measuring depth. Change settings with up and down keys. Push READ to obtain moisture measurements. Instrument stays on for 3 minutes, then turns itself off.

At any time you can change from pin mode to scan mode by depressing up or down button HOLD function is available for measuring in places, where the display cannot be seen or when taking photos of the display.

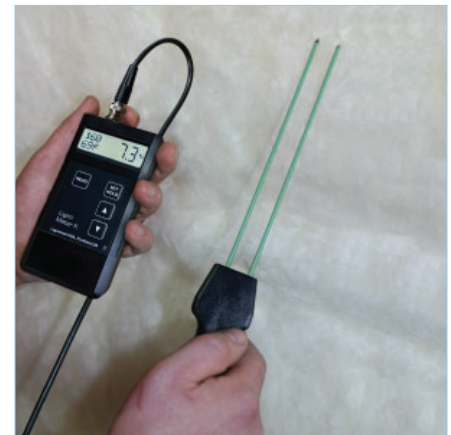
Display shows moisture percentage, wood species and wood temperature settings.



Inspector electrode E14-V measures in placed where other electrodes cannot reach, with EL pins up to 7" deep.



Measurements obtained from concrete or cementitious materials are not true percent values. They only can be used as reference numbers or comparative readings.



Adding the EL Pins allows reaching through insulation to measure structural components. EL Pins are 7" long, teflon-coated. Can be added to E16's also

## Electrode E12 Specifications

Weight 3.5 lbs. Length without pins 12".

A cable connector (BNC) is mounted at the head of the electrode.

A BNC cable (3ft) to connect electrode E12 to Lignometer K is included in pkg. KPP-M

**E12 pins** are teflon coated to only measure at the tip and come in three options:

- DZ Pins insulated, measuring depth 1"
- DA Pins insulated, measuring depth 1.5"
- DB Pins insulated, measuring depth 2"

1 pair DZ pins and 1 pair DA pins are included in the package. DB Pins are not included.

## Electrode E14-V Specifications

Weight 5 oz. Length without pins 7".

The electrode E14-V comes with a cable to connect to the Lignometer K.

**E14 pins** are teflon coated to only measure at the tip and come in two options:

- EG Pins insulated, measuring depth 3/4"
- EL Pins insulated, measuring depth 7"

1 pair EG pins is included in the package. EL pins are not included.

## Electrode E16 Specifications

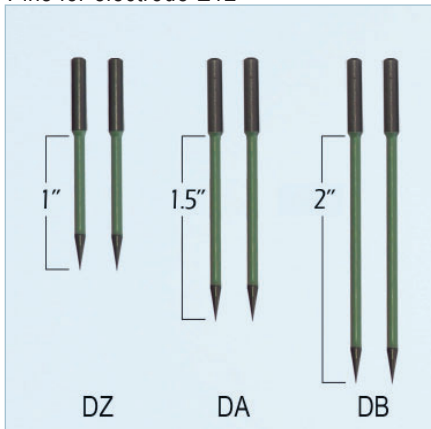
Electrode E16 consists of 2 posts. Each post is connected with the BNC-E16 cable to the Lignometer K. The split cable with two 4mm plugs and a BNC connector for the Lignometer is included in the package.

**E16 Pins:**

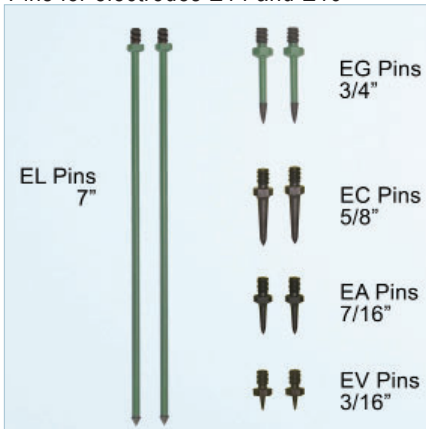
- teflon-coated pins EG and EL
- un-coated pins EC, EA, EV (1 pair EC pins is included with E16)

1 pair EC pins is included in the package. EG, EL, EA and EV pins are not included.

Pins for electrode E12



Pins for electrodes E14 and E16



## Package Includes

1 Lignometer K meter with 9V battery, laminated wood group card, instruction manual and built in BNC connector for external electrodes including E14-V and in-kiln probes or monitoring cables (with Adapter H)

1 Slide-hammer electrode E12, 1 pair pins DZ 1" and 1 pair pins DA 1.5", teflon-coated  
1 BNC cable for E12

1 Inspector electrode E14-V with BNC cable, 1 pair pins EG 3/4", teflon-coated

1 Specialty electrode E16, 1 pair pins EC 5/8", un-coated

1 BNC-E16 cable for E16

1 Case M



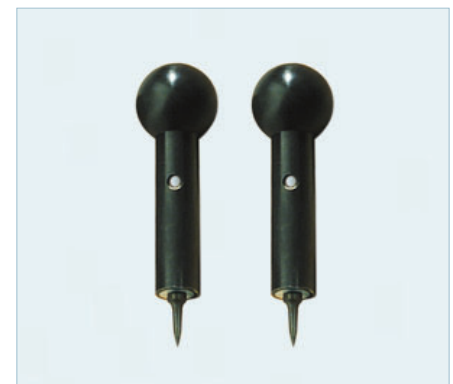
The electrode E12 has a slide hammer to insert and extract pins easily.

For measurements up to 2" deep.



Inspector Electrode E14-V is designed to measure hard to reach areas easily..

E14-V is tough enough to hammer pins into hard materials.



Electrode E16 for hard bldg materials and cement-based panels for  
Connects with BNC-E16 cable to VersaTec