

Package K2-33M

Description

The package consists of the moisture meter Lignometer K and E12 pin electrode in a hard-shell carry case. Kiln monitor consists of 3 cables 12ft long, 3 pair PKB probes, 1 EMC holder with wafers optional 4 cables 12ft long), 4 station plate, 4 position switch box and connecting cable 15ft long.

Applications

Lumber drying – for small to medium sized kilns of all types – from solar to conventional steam kilns. Measuring moisture inside a kiln without entering the hot dry kiln and measuring moisture anywhere, anytime with pin electrode E12.

Advantages

The Lignometer K is a great meter for lumber drying and wood product manufacturing. Wide moisture range, multiple species corrections and wood temperature corrections are built-in. E12 electrode is used for spot-checking surface and core moisture for even or uneven moisture distribution.

Cables, PK probes, Switch Box and Station Plate are used:

- For kiln drying, nobody has to enter a hot kiln. The drying cycle is monitored to avoid over and under drying and to know, when the lumber is dry. Measurements are obtained outside the kiln at the switch box. EMC station allows measuring humidity inside the kiln (replaces wet bulb thermometer).

The **Lignometer K** incorporates reliability, calibration accuracy and ease-of-operation with over 150 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.

PK probes and cables have been used to measure moisture inside a dry kiln for over 50 years. To this day, the same PK probes are used with Lignomat's dry kiln control systems for small and large, industrial kilns.

If multiple probes and cables are used, kiln performance can be checked by distributing the cables in top, bottom, sides and middle of the kiln. Cables can be custom-cut upon request, standard 6ft.

All PK probes have a hole in the head for pushing a 4mm banana plug through. This is a fail-proof connection. The probes have teflon-coated shanks measuring at the core not affected by surface moisture. Probes are inserted into pre-drilled holes and are set and removed properly with the Pulling Tool.

All PK probes are made out of stainless steel to withstand the harsh conditions in a kiln. They can be re-used for many drying cycles. Using pulling tool will help to set and remove probes without any damage.

PK probes can be used in many materials other than wood, such as concrete, brick, tile, roofing. They monitor changes in moisture content at the depth where the tips of the probes are placed. PK probes and Cables can be used with:

- handheld moisture meters,
- angle connector and switchbox,
- MC Tracker data logger
- wireless transmitters.



Multi-function meter with in-kiln monitor for remote measuring.



The electrode E12 has a slide hammer to insert and extract pins easily. For measurements up to 2" deep.



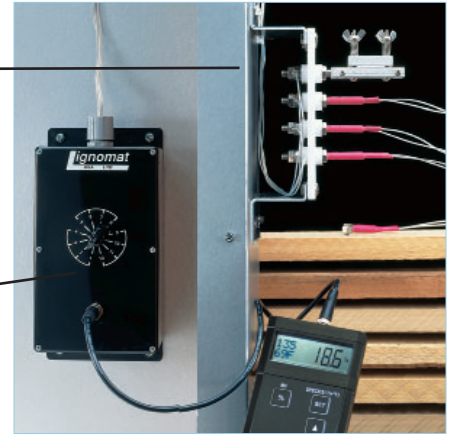
The probes have teflon-coated shanks, which insure that the moisture is measured at the depth the probes reach.

In-kiln monitor: Station plate, switch box, cables, wood probes allow for measuring inside the kiln and obtaining the measurements outside the kiln.

A **station plate** is mounted inside and acts as a junction box for 3 (4) sets of PK-H cables and 1 (0) EMC holder. EMC holder plugs directly into the station plate. Teflon cable (15ft) to connect station plate to switch box is included. Cable is long enough for a distance of 3 1/2 ft between switch box outside of kiln and station plate inside of kiln.

A **switch box** is installed outside the dry kiln and connected to the station plate by wires. The switch box is equipped with a BNC connector for the BNC cable from the Ligno-VersaTec and a 4 to 12 position dial to obtain measurements from the station plate.

Large kilns: 3 station plates can be used per switch box for a total of 9 (12) wood probe/cable sets and 3 (0) EMC stations. Call customer service for a quote when more than one station plate per kiln is needed.



Place probes in the lumber inside the kiln, read moisture outside without opening a hot kiln. Multiple probes allow monitoring different areas in a kiln.

Electrode E12: The E12 is designed to measure from the surface 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 electrode E12, even though the Ligno-VersaTec by itself can take moisture measurements at two depth levels 1/4" and 3/4" deep in pinless mode.

Wood: Taking numerous readings as pins are inserted, 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 wood products. The thicker the wood, the more important core readings become. No other tool can achieve the same measuring accuracy at a defined depth.



Slide-hammer to pin-point moisture distribution from surface to core up to 2" deep with DB pins.

Meter Specifications

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

Measuring Range:

- Wood: 5-99% (pin)
- Gypsum, Sheetrock, Wall Boards: 0-7%
- Reference Scale: 0-99

Display: Resolution: 0.1% for all values

Species Corrections

over 170 settings to correct for:

- domestic and tropical wood species
 - bamboos, vertical, horizontal and strand
 - OSB and wood-based panel products
 - gypsum, drywall, wall boards interior, exterior, and water resistant (%)
- 3 Reference Scale for building materials including concrete

Operation: Working with the Ligno-VersaTec is simple with clearly marked push buttons. Meter fits comfortable in your hand for pin and pinless readings.

Functions:

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

When the RH BluePeg is connected, the meter automatically switches to RH mode. No further set-up is necessary.

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, wood temperature (only pin) and depth settings (only pinless).



At any time, the Lignometer K can be used with the electrode E12 for spot-checking moisture conditions.

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 Ligno-VersaTec is included in pkg V2-33M

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 not included.

PK probes can be used in many materials other than wood, such as concrete, brick, tile, roofing. They monitor changes in moisture content at the depth where the tips of the probes are placed. Pulling tool helps to insert and remove PK probes properly.

PKA: measuring depth 1/2" (1.2cm) 4/4 lumber

PKB: measuring depth 3/4" (1.9cm) 6/4 lumber

PKC: measuring depth 1" (2.5cm) 8/4 lumber

PKD: measuring depth 1 1/2" (3.8cm) 12/4 lumber

PKE: measuring depth 2 3/4" (7cm)

Measurements from PK probes can be obtained with

- handheld moisture meters (Lignometer K or Ligno-VersaTec)
- MC Tracker data logger
- wireless transmitters

Package Includes

1 Ligno-VersaTec meter with 9V battery, laminated wood group card, instruction manual, built in connector for assortment of external electrodes and in-kiln probes (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 and carry case M

- Kiln monitor

- 1 4-position station plate
- 1 4-position switch box
- 15ft teflon cable
- 3 pair PKB probes
- 3 PK-H cables 12 ft long
- 1 EMC holder



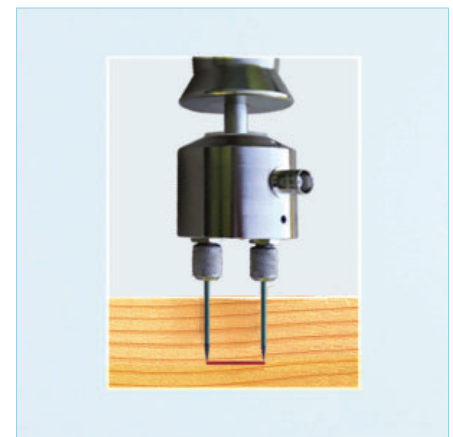
Assortment of PK probes for a measuring depth of 1/2" to 2 3/4" deep.
V2-11M package comes with PKB probes, work for 4/4 and 6/4 lumber.



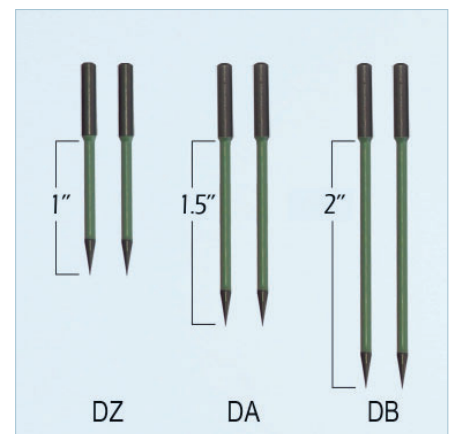
Pulling tool fits over PK probe head. Assures placement and removal without damage to the probes. Must be ordered separately.



The electrode E12 has a slide hammer to insert and extract pins easily. For measurements up to 2" deep.



Teflon coated pins measure only at the tip. The E12 is the only tool to measure moisture at a defined depth.



Pins for E12: DZ, DA, DB pins can only be used with the Electrode E12. DB pins need to be ordered separately, not included in package.