# Package M24-M

## Applications

Measuring hardwood, softwood and panel products with the mini-Ligno MD/C. With these 2 electrodes you can choose the right measuring tool for the job on-hand. The 2 electrodes are for measuring wood with depth electrode E12 and using the E14-m for all other applications, could be measuring specialty woods or investigate water damage in homes.

When the integral pins of the mini-Ligno MD/C are not reaching the areas to be measured or the material is too hard for the pins to be pushed in by hand

## Advantages

The mini-Ligno MD/C offers Lignomat quality at its best price. The measuring range of 6%-25% is still wide enough to cover applications from woodworking to home construction and home restoration, lumber drying, even measuring firewood. Correction settings are built-in for measuring hardwoods, softwoods and panel products.

Using the electrode E12 allows accurate measurements up to 2" deep in wood with insulated pins. Using the electrode E14-m allows measurements up to 7" in drywall, wall boards and other materials, in areas which would be hard to reach without the E14-m. Also used to measure very hard wood and other hard materials even concrete.

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**For wood:** The integral pins at the mini-Ligno measure 7/16" deep. When measuring thicker lumber, you can make a fresh cut and measure the end grain to reach the core. If it is not feasible to cut the wood, you can use the electrode E12 for depth measurements.

**For building materials:** The pins on the meter work well in soft materials such as drywall for a depth of 7/16". If corners and tight places cannot be reached with the integral meter pins, use the electrode E14-m or E16, whichever is more convenient. Add EL pins for measuring in-depth up to 7" deep.

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. With these 2 electrodes you can always choose the right measuring tool for the job on-hand.

E12 pins are teflon-coated to only measure at the tip. This is important to determine if a moisture gradient exists from a dry surface towards to wet core, but it is equally important to be able to measure through a wet surface to determine how far moisture has been absorbed and at what depth the material stayed dry.



Pin meter mini-Ligno MD/C with Electrode E12 and E14-m. With the 2 electrodes you can always choose the right tool for the job to be done.



Bright LED display for optimum visibility. Display has a life-time warranty. Quality, performance and price have made mini-Lignos very popular.



In-depth measurements detect unevenly dried wood and help avoid costly mistakes. Used when installing, inspecting floors and for restoration jobs.



**Inspector Electrode E14-m** 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 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.

Pins measure only at the tip. EG and EL pins are teflon-coated up to the electrode handle. Moisture from a wet surface is never picked up, even if the pins are pushed all the way into the material.

Using the external electrode E14-m allows you to keep the meter display visible in front of you. Measuring ceilings, walls or floors with the meter itself can make it impossible to read the numbers on the display.

**Hard Materials:** Electrode E14-m 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.

## **Meter Specifications**

Size: 5.5"L X 2.75"W X 1"H Measuring Range: Wood: 6-25% Display: Resolution: 1% steps, lifetime warranty. Calibrated for a wood temp of 70°F (20°C). A correction table for different wood temperatures is listed in the manual.

#### **Species Corrections**

2 settings to correct for

- softwood, hardwood and panel products (%)

## **Electrode E12 Specifications**

Weight 3.5 lbs. Length without pins 12". A cable connector (BNC) is mounted at the head of the electrode. A mini-BNC cable (3ft) to connect electrode E12 to mini-Ligno C's is included

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

## **Electrode E14-m Specifications**

Weight 5 oz. Length without pins 7". The electrode E14-m comes with a cable to connect to the mini-Ligno C's..

E14 pins are teflon coated

- EG Pins insulated, measuring depth 3/4"
- EL Pins insulated, measuring depth 7"
- 1 pair EG pins is included in the package.



## Package includes:

1 mini-Ligno MD/C meter with wrist strap in carrying pouch with belt loop, 1 9V battery, 1 laminated wood group card and 1 instruction manual 2 pair pins: 1 pair of 3/16" and 1 pair of 7/16" measuring depth (5mm, 10mm) Built in connector for an assortment of external electrodes and in-kiln probes 1 mini-BNC Cable

- 1 slide-hammer electrode E12 with 2 pair pins
- 2 pair pins: 1 pair 1" DA pins and 1 pair 1.5" DZ pins
- 1 inspector electrode E14-m, 1 pair EG Pins, 3/4" measuring depth (19mm)





For all areas in the building envelope where the meter pins cannot reach or the display cannot be read.



Electrode E12 measures up to 2" deep with insulated pins. Quality control at its best.



Inspector Electrode E14-m is designed to reach where moisture hides. E14-m is tough enough to hammer pins into hard materials.