

## LignoMat RH Range

Before installing resilient floor coverings or coatings, the moisture in concrete slabs or wooden subfloors should be tested to avoid failure. The floor covering industry recommends the RH in-situ probe method for concrete moisture testing, the pin meter is commonly used for wood testing.

### Ligno-Tec RH

The Ligno-Tec RH meter is the right choice for you, if you have all the moisture meters you need or if you are a concrete contractor, who never needs to measure any wood. The Ligno-Tec delivers absolute reliability for many years of usage. It is your best choice for a RH-only meter.

### Included in Package

The Package RH-KS includes the Ligno-Tec RH and basic necessities for RH concrete moisture testing. The standard configuration includes:

#### RH Blue-Peg

Discrete sensor, uses a single microchip, factory calibrated to NIST standards. Each BluePeg comes with a NIST traceable certificate. The RH BluePeg Probes comply with the latest ASTM standard for F2170

#### RH Concrete Cable

RH-C cable is used to connect RH BluePeg probe to a RH moisture meter or data logger. The black seal-plug is used during in-situ concrete testing. The plug fits into the sleeve, holds the RH Probe in place during measurements and prohibits air from escaping. The seal-plug also allows disconnecting the cable without removing the probe.

#### RH Adapter

The adaptor connects a RH BluePeg Probe directly to use the meter as an ambient RH Meter

#### Standard Sleeves

Hole liner for RH in-situ concrete moisture testing. Sleeves and blue caps, length 46mm. Longer sleeves 75mm are available. Cap with rubber seal is very flat as to not be disturbed by foot traffic during acclimation times. Red caps are optional for use to mark sleeves containing BluePeg Probes.

#### Case

The black hard-shell case comes with a handle and a foam insert for protection. Size: 30.5 x 20.3 x 9 cm



## Features

- Microprocessor-based circuitry assures stability and accuracy for the life-time of the meter.
- Meter indicates RH, T, DPT, GPP
- BluePeg probes are individually numbered between 001 and 999 ensuring unique identifiers for each probe location on site. This number appears with the current measurement on screen.
- The meter has a HOLD function, to use when the display is not visible during measurements, and to use when scrolling through RH, T, GPP, DPT to obtain correlating sets of values.

## Optional Extras

- Additional RH BluePeg Probes for in-situ concrete testing.
- Standard Sleeves Hole liner (46mm) for RH in-situ concrete moisture testing. Available in Packs of 100
- Longer Sleeves (75mm) are also available in 100 pack



## LignoMat RH Range

### Ligno-DuoTec BW

The Ligno-DuoTec system adds a pinless, dual depth non-invasive Moisture Meter. This system is ideal where you need to evaluate comparative moisture levels in concrete, wood, plaster or wooden flooring systems in addition to RH testing of concrete substrates before installation.

### Ligno-Versatec

The Ligno-Versatec is the most complete LignoMat moisture measurement system, offering Relative Humidity measurement via the BluePeg Probe, a pinless capacity built in to the meter and the option to add the full range of LignoMat pin probes to the test package.

For the professional coating installer the Ligno-Versatec can do any test required for common building materials. Operators will never need another moisture meter.



### Data Logging Options

LignoMat offers two options for on site data logging, a dedicated onsite single location data logger, and a wireless monitoring system for monitoring of a whole site from a remote location.

#### Memo-Chip BL2 Data-Logger

- Humidity data loggers provide more information than single readings from a thermo-hygrometer. Install a BL2 to keep track continuously.
- LED lights and audible alarms can be set to indicate out-of-range values. Selectable time-interval 30 sec to 24 hrs.
- Relative humidity and ambient temperature
- DPT (dew point temperature)
- GPP (grains per pound)
- EMC (equilibrium moisture content for wood)
- Add an MC Tracker module to the system to simultaneously record 1 RH probe and 3 pin moisture measuring probes.

### Wireless Data Logger System

The wireless Moisture-Log System allows uninterrupted data acquisition of:

Wood moisture, Wood Temperature, EMC

- Moisture of Drywall, Insulation and other Building Materials
- Relative Humidity / Air Temperature
- Concrete Moisture using in-situ RH Probes
- Reports can be viewed on-site or anywhere in the world via Internet.
- Transmitters can be placed anywhere within the test area. Distance between transmitters and receivers can be up to 300 m line of sight. Two or more receivers can be connected to reach beyond 300m.
- Data collection is completely automatic and continuous, with a real time stamp. no time taking notes and no interruption of reporting when you are not on-site. Reports are available on-site or at a secure Web-server.



## LignoMat RH Range

### Test Methods

#### Relative Humidity

The LignoMat RH system complies to the latest ASTM standard. We are committed to up-dating our equipment if needed to any changes suggested by ASTM F2170. A summary of the test procedure is below:

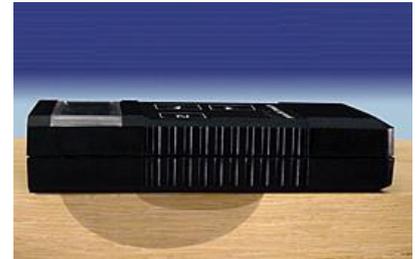
- Drill and prepare the test holes. Each test hole must be drilled to the depth determined at Step 5 above (section 10 of ASTM F2170-16) and properly prepared.
- Insert RH sensor. Follow the manufacturer's directions for inserting sensors into each test hole. Each hole should be capped and sealed according to manufacturer's directions during equilibration.
- Equilibrate sensors for 72 hours before initial reading. Wait 72 Hours. ASTM F2170-16 requires each sensor to equilibrate at least 72 hours before a documentable reading is recorded.
- Take RH readings- After the 72-hour equilibration time frame, an initial reading should be recorded for each sensor. In addition to the RH value, verify too that the reading does not drift more than 1% over a 5-minute period
- Use a checklist to record and report the RH readings. Section 11 of ASTM F2170-16 details the requirements of each report, including test hole location, dates and times of measurements, RH reading, temperature reading, and any other conditions that might impact the RH reading

Calibration Check Salts can be used to check accuracy of relative humidity probes. Available for 75% and 33%.

#### Pinless Moisture Content

Pinless Moisture Meters use electro-magnetic wave technology which measures density in a three dimensional field underneath the instrument.

- If moisture varies within the segment, the average moisture content is indicated. Corrections are available for different wood species.
- Wood temperature does not affect moisture readings.
- Scan large areas quickly and are good indicators for water pockets and moisture changes across the board.
- Leaves no pin holes.
- Indicates average within measuring field. Cannot show differences between surface and core moisture.
- Requires a smooth surface and a flat measuring area.
- Select the Scanner with the appropriate measuring depth 1/4" or 3/4", dual-depth with 1/4" and 3/4".



#### Pin Meter Moisture Content

Pin Moisture Meters measure the electrical resistance between two pins. If moisture varies within the small measuring area, the highest value is indicated. Australian standard AS 1080.1 Timber - Methods of test - Moisture content covers testing timber with pin meters, the LignoMat range is fully compatible with this standard.

- Give precise readings and are good indicators for evenly or unevenly dried wood.
- Leave two pin holes.
- Indicate highest moisture value.
- Insulated pins measure only at the depth they are driven to.
- Not affected by surface texture or shape as long as both pins can be inserted.
- Measure narrow spaces up to 7" deep with EL Pins. Can be extended with remote cables and probe



The calibration of LignoMat's pin and pinless meters is checked and adjusted internally automatically, before each measurement. If a calibration check is needed, functions of pin meter, cable and electrode can be verified with test blocks TP (pin). For pinless meters use test block TS (pinless).

## LignoMat RH Range

### Pin Meter Probe Range

#### Depth Electrode E12

For wood or soft building materials (drywall, plaster). The E12 is the industry standard for quality control, because of the ability to accurately indicate surface and core moisture. As the pins are hammered towards the core multiple readings indicate moisture distribution. No other tool can achieve the same measuring depth and measuring accuracy. Pins are available for 25, 37, 50mm depth ranges, all pins are teflonized.

#### Inspector Electrode E14

The Electrode E14 is designed to measure hard to reach areas in the building envelope. The slim shape allows for measuring in corners, around pipe, below window sills. The pins are Teflon coated up to the Electrode handle so surface moisture is never picked-up, even if the pins are inserted all the way into the material. The knob at the end of the Electrode E14 can be removed and replaced by a standard broom stick or paint brush handle. For measuring ceilings without ladders or carpets without bending. Pins are available for 5, 10, 15, 20, 175mm depth ranges, 20 mm and 175mm pins are teflonized.

#### Concrete Electrode E16

The Electrode E16 is for measuring soft and hard building materials such as drywall, concrete, tile, brick and masonry. The Electrode E16 gives instant readings when measuring concrete. Even though the measurements are not accurate enough to determine whether or not floor coverings can be installed; measurements detect areas of high moisture content and indicate where further testing is required. The advantage of Electrode E16 are the two single pin probes, which are easier to insert into hard material and hard to reach areas than the standard 2-pin electrode. Probes can be lightly tapped to drive them into hard materials. Pins are available for 5, 10, 15, 20, 175mm depth ranges, 20 mm and 175mm pins are teflonized.

#### Remote Probes

Lignomat's probe and cable systems are intended to setup permanent monitoring points such as within timber curing kilns. Pins can be placed in representative areas and Teflon coated cables withstand high humidity and temperature environments to allow data collection or logging at a central point.



## About PCTE

PCTE have over 30 years' experience in the measurement and testing of construction materials. PCTE can provide more than just the equipment, they can provide expert training. PCTE have a service centre in Sydney in which they can provide calibration, repairs and warranty repairs.

## Other Equipment

PCTE supply three main ranges: NDT, Lab and Geotech Instrumentation.

NDT includes: Rebound Hammers, Covermeters, Ultrasonics, GPR, Corrosion Testing, Coating Testing and Foundation Testing

Lab includes equipment for: Concrete, Cement, Aggregate, Soil, Asphalt and Metal

Geotech Instrumentation includes: Strain Gauges, Piezometers, Inclometers, Extensometers, Tiltmeters, Load Cells and Dataloggers