

Package V4-KS

Applications

The V4-KS package is designed for installation, inspection, construction, restoration and water damage repair jobs. Pin mode is the best option when deep measurements are necessary. Pinless mode is the best option for search and compare to detect problems 1/4" or 3/4" deep. Add EL pins for measuring up to 7" deep.

Package V4-KS includes accessories for RH in-situ testing of concrete slabs. Recommended by most floor covering manufacturers before installing resilient floor coverings, you when tracking moisture infiltration in floors, walls, ceilings and roofs. Add EL pins fo

Advantages

The versatile, accurate Ligno-VersaTec incorporates multiple functions and delivers absolute reliability for many years of usage.

It is your best choice for a **pin – pinless – RH combination meter**.

Package V4-KS includes Ligno-VersaTec meter for pinless measurements, inspector electrode E14-V for pin measurements and accessories for RH in-situ measurements of concrete slabs with **re-usable RH probes**. Pin mode usage can be optimized by adding E12 slide hammer electrode for easy setting and extracting pins up to 2" deep. Pkg V24-KM

Description

V4-KS package offers four measuring technologies to detect high moisture levels within the building envelope, including the concrete slab in preparation for installing resilient floors.

- **Pinless mode**: materials can be checked fast and easy, scanning along the surface.
- **Pin measurements**: The E12 electrode is used for in-depth measurements
- **In-situ probe testing**: Included are standard accessories for in-situ moisture testing of concrete slabs.
- **Thermo-hygrometer**: With RH BluePeg probe and RH adapter, the VersaTec can be used as a precision, fast-acting thermo-hygrometer....

The **pinless mode** in the Ligno-VersaTec is set to measure 1/4" and 3/4" deep, using separate sets of calibrations for each measuring depth. Pinless mode in the VersaTec allows fast and easy measurements of flat materials up to 3/4" deep. If the material is not flat, or measurements should reach deeper and differences between surface and core moisture have to be measured, the Electrode E12 should be used to accomplish those tasks.

In-situ probe testing of concrete

The V2-KM package contains accessories needed for RH testing:

- 1 RH Bluepeg probe (option 5 or 10 RH probes)
- 10 sleeves with caps
- 1 RH-CC cable and 1 brush (drill bit is not included)
- 1 RH Adapter connector VersaTec to RH BluePeg to use as thermo-hygrometer

Design of equipment and test procedure are governed by the ASTM standard F2170. Lignomat's RH BluePeg system complies with the latest F2170 standard.

After drilling, cleaning and setting the sleeve, the RH BluePeg probe easily drops into the sleeve. The cap fits perfectly and is as flat as can be. The cable connection is provided by a simple, fail-proof 3.5mm stereo plug. No pin alignment of the cable needs to be fitted and no set-up of the meter is necessary. The meter switches into RH mode as soon as an RH cable is connected. Plug in and read, that's what our customers like.

The display shows the measured value and the RH Probe number. The RH probe number is an individual number 1-999 to allow keeping track of probe location during testing, measurements and performance.

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Multi-function meter with E12, E14-V

- pinless and pin measurements
- in-situ concrete testing
- Thermo-Hygrometer



For all areas in the building envelope where pinless measurements cannot reach or the display cannot be read.

Detect moisture where it hides!



Lignomat's RH BluePeg system for in-situ RH concrete moisture testing, conforms to ASTM F2170 with reusable probes.

Inspector Electrode E14-V with teflon-coated pins EG: The slim shape allows for checking around pipes, below window sills, in wall corners, places where round electrodes or built-in pins from moisture meters cannot reach. With the E14 you can truly track moisture where it hides. Adding the 7" long EL pins lets you reach through insulation or under baseboards into structural components. Great for EIFS inspections. For depth measurements in wood, wood floors or structural lumber up to 2" deep, we recommend adding the slide-hammer electrode E12 see also package V24-KM

The knob at the end of the handle can be removed and replaced by a paint brush handle or broom stick. You can stay a 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.

In addition, the electrode and pins are built tough, which allows the user to hammer pins into wood and other hard materials, without damage to the probe or the pins. (Strand bamboo, hard hardwood and even cementitious materials)

RH mode / Thermo-Hygrometer: To activate the RH thermo-hygrometer mode, plug the RH Adapter with the RH BluePeg probe into the stereo connector at the top of the meter. Instead of using the Adapter RH, the 6 ft RH-CC cable included in the package can be used for remote measurements (any stereo cable could be used).

As soon as the connection is established, the Ligno-VersaTec is in RH mode. When the READ button is depressed, the meter immediately indicates the RH value. The up or down keys allow recalling the values for ambient T, Dew Point T and Grains Per Pound.

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 scales 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: Pin and Pinless:

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).



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



RH mode - Thermo-Hygrometer: RH Adapter is used to connect RH BluePeg probe to meter.



Pinless mode: fast and easy moisture checking of lumber and flat boards. Domestic and tropical woods, wood floors, engineered products, bamboo.

Electrode E14-V Specifications

Weight 5 oz. Length without pins 7".

Electrode E14-V comes with a 3 ft BNC cable to connect to the Ligno-VersaTec moisture meter.

Electrode E14-V can be connected to

- Lignometer K
- Ligno-VersaTec

E14-V pins come teflon coated or uncoated depending on the measuring depth. Teflon coated pins only measure at the tip.

- EG Pins insulated, measuring depth 3/4"
- EL Pins insulated, measuring depth 7" not included in package V4-KM included.

The **RH BluePeg probe** uses a single micro-chip humidity and temperature sensor, factory calibrated to NIST standards. A NIST certificate can be found on this web page in the Document tab. During the first year we offer to check the accuracy of the probe calibration three times at no extra cost. This is helpful for our customers, who use the RH probes for in-situ concrete testing, because ASTM regulations require a calibration check when the probes are being **re-used**.

Specifications:

Relative Humidity	0% to 99%: Resolution for entire range is 0.1% ±2% for 10 to 90% ±3% for 0 to 10% ±3% for 90 to 99.9%
Ambient Temperature	5°F to 160°F: Resolution for entire range is 0.1°F (0.1°C) 32°F to 120°F, ±0.5°F (0°C to 50°C, ±0.3°C) 5°F to 32°F, ±1°F (-15°C to 0°C, ±0.5°C) 120°F to 160°F, ±1°F (50°C to 70°C, ±0.5°C)
DPT	- 17.8°F to 160°F (Dew Point Temperature)
GPP	0-99.9 (Grains per Pound)

Size Ø 0.5 inches (1.27cm), length 1.35 inches (3.8cm)
Multiple slots for air circulation around RH sensing element

Connection Easy-to-connect 3.5 mm stereo connectors.

RH probe comes with 3.5mm stereo jack.
RH adapter and RH cables come with 3.5 mm stereo plugs
on both ends to connect RH BluePeg probe to meters or data loggers.

Calibration Calibration Salts for 33 and 75% RH available. During the first year Lignomat checks the calibration three times at no charge.

All Lignomat meters come with a 2 year warranty. Accessories have one year warranty. Battery and pins are excluded.

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 E14-V electrode with EG pins and 3 ft BNC cable
- 1 Case S

- RH Accessories

- 1 or 5 or 10 RH BluePeg probes (Choose an option)
- 10 Sleeves with caps standard 1.8"
- 1 RH adapter, direct plug-in for Ligno-VersaTec and RH probe
- 1 RH concrete cable with seal plug to measure RH, while the RH probe is in the sleeve



Inspector electrode E14-V fits in placed where other electrodes cannot measure



Adding the EL Pins allows reaching through insulation to measure structural components.
EL Pins are 7" long, teflon-coated.



RH accessories include:
- BluePeg Probe
- RH Cable, Adapter
- RH Sleeves

Accessories Concrete Moisture Testing **with in-situ probes** compliant with ASTM F2170F



1. RH BluPeg probes

1. RH BluePeg Probe (#RH-B):

The RH BluePeg probe measures relative humidity and ambient temperature. Readings are obtained at the Ligno-VersaTec, Ligno-DuoTec BW, LignoTec RH or Data logger BL2:

- for measuring ambient conditions
- for obtaining measurements from in-situ probes for concrete moisture testing.

Packaged as single, 3, 5, 10, 20 units.

Red caps are supplied with the multiple packs to mark sleeves, which contain an RH Probe,

When using the RH probes for in-situ testing, the ASTM standard requires testing the accuracy of the probes before reusing them. For on-site and in-office checking we offer salt solutions. We also offer to test the probes free of charge during the first year.



2. RH Sleeves 1.8" and 3"

2. RH Sleeves with Caps (#RH-S):

Sleeves are the liners for the test holes, drilled with a 5/8" drill bit. The cap seals the opening. Sleeves can be cut to the required depth. See ASTM F2170 standard for depth requirements.

Sleeves 1.8" available in packs of 20, 50, 100.

Sleeves 3" available in packs of 10, 50, 100.

Use Depth Adapter (3) for long sleeves and Top Extender (\$) for shortened sleeves.

3. RH Depth-Adapter (#RH-DA):

For sleeves over 2.4" deep we recommend to use Depth-Adapter to make it easier to connect the cable when the probe is inside the sleeve. Available as 1 unit and pack 5 units.



3. Depth Adapter over 2.4"

4. RH Top-Extender (#RH-EX):

The RH BluePeg probe sticks out over the surface of the concrete, when the sleeve is less than 1.6" long. The top-extenders cover the probe during the test and allow using the CC cable the same way as in the sleeve.

5. RH Cable for in-situ Concrete Test (#RH-CC):

The RH-CC cable is a standard 3.5mm stereo cable 6ft long. One end is equipped with a sleeve-seat-plug. The plug is used to keep the probe in place while taking measurements and to un-plug the cable without having to take the probe out of the sleeve, which would disturb the acclimation.



4. Top Extender for short sleeves

6. RH Salt-solution for 75% Accuracy Check: (#RH-T75)

The salt bottle (75%) is used to check the accuracy of RH probes before reusing, see ASTM standard F2170. Bottle has fittings for RH BluePeg probes and includes RH-CB cable.

7. **Brush (#RH-BR):** Cleaning brush with round tip to brush off loose particles after drilling.

8. **Vacuum Attachment (#RH-V):** Removes dust and loose particles after drilling.

9. **RH Adapter (#RH-A):** Short connection between probe and meter. The RH adapter is mainly used instead of the cable, when measuring relative humidity and ambient temperature.



5. RH-CC cable for in-situ test



6. Salt Solution 75% Test



7. Brush



8. Vacuum Attachment



9. RH Adapter thermo-hygrometer

Advantages of Lignomat's in-situ RH Probe, RH BluePeg System Acomplies with ASTM F2170F

We have designed a user-friendly, reliable system which complies with the ASTM standard F2170 . The RH BluePeg probes use a single microchip, factory calibrated to NIST standards. The RH BluePeg Probes comply with the latest ASTM standard for F2170.



The RH BluePeg probes are retrievable and reusable. For checking calibration accuracy, the ASTM standard has to be followed. For on-site and in-your office testing we offer a salt-solution bottle to check for 75%, a test allowed by the ASTM standard to check in-situ RH probe accuracy before re-using the probes. During the first year, Lignomat offers to check the probe calibration three times at no charge.

Note: The Lignomats system allows easy tracking of RH probes. Each probe shows its own 3-digit number every time the display is activated for readings.



Better sealing, easier-to-place sleeves, adaptable to any length up to 3". Lignomat's sleeves have feathered fins along the entire length, which provide an excellent seal. The lip of the sleeve covers the area around the concrete hole and provides an effective barrier for any air escaping, because the lip is part of the sleeve. At the bottom of the sleeve is a movable cylinder, which places the RH Probe every time as required by ASTM F 2170, even if the hole is slightly too deep. Standard sleeves require no cutting.

Longer sleeves are available 3". The sleeves can be cut to any depth required.

- If the sleeves are over 2.4" long, we recommend the RH depth-adapter for easier cable connections. (#RH-DA)
- Shorter sleeves may need the top-extender. The top-extender covers the rh probe and plugs into the sleeve to seal during the 24-hour waiting period. (#RH-EX)



Better sealing, flatter caps:

Lignomat's caps come with an O-ring to absolutely seal the sleeves. The caps are flat and do not interfere with any traffic around the test area.



Fast connection:

A fail-proof, easy-connect 3.5mm stereo plug is used to connect RH probes with the RH meters. No twisting, turning or setting-up an instrument for readings. No pin arrangements need to be fitted. We use a standard 3.5mm stereo cable. The cable comes with a seal-plug, which is pressed into the top of the sleeve and keeps the cable in place during the time moisture readings are obtained. After the readings the cable is un-plugged and removed. Cable can be unplugged without taking the BluePeg probe out of the sleeve for further testing. Cable is also used to remove the RH BluePeg plug from the sleeve after the test is completed. RH plug can be used for further testing, check calibration rule ASTM F2170 for multiple use probes.

Most accurate testing: Our Meter instantly shows the RH and temperature values. The resolution on Lignomat's RH meters is 0.1, 0.1%, 0.1°. No guessing or rounding up. The large numbers on the display are easy to read from with the meter, which you are holding in your hand.



Thermo-Hygrometer: The Ligno-VersaTec meter can also be used as a thermo-hygrometer. For that application, the short RH adapter comes in handy. The RH adapter is included with every package. All RH meters from Lignomat (Ligno-VersaTec, Ligno-DuoTec BW, Ligno-Tec RH) show

- relative humidity
- temperature
- dew point temperature
- grains per pound.