

Moisture Meter LD2

Operation instruction

Duly use:

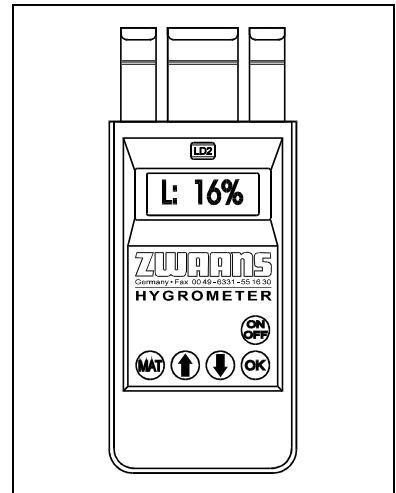
The electronic moisture meter HANDYBOY LD2 is especially developed to be used in the normal production of a modern tannery. The meter measures 2 – 3 cm deep in the leather and gives the accurate average moisture of these 2 – 3 cm. Therefore the meter has to be pressed with the electrodes on a flat surface area of at least 10 x 10 cm, with a distance to the edges of about 2 cm

Application: for leather piles

Minimum thickness of the materials: ≥ 2 cm or in a pile

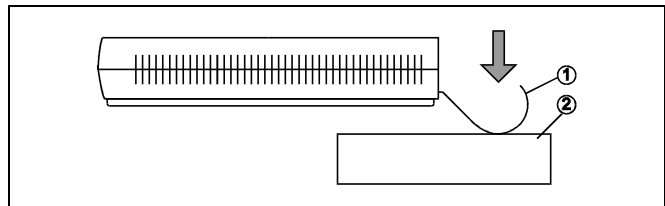
Range: 5 – 65 % H₂O

material temperature range	+5 - +40 °C
working temperature range	+5 - +40 °C
storage temperature range	-20 - +70 °C



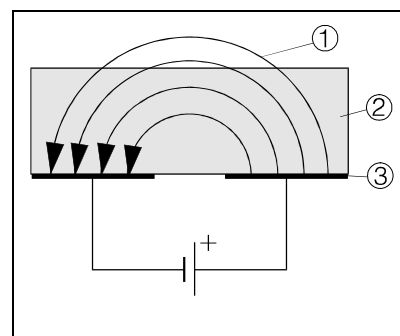
Method of operation:

The measuring electrodes ① of the meter are pushed during the measuring process on the material ② to be measured so that a high frequency electrical field is able to pass through the material. A micro processor receives the measured signals and determines from the measured value the percentage water content taking into account the programmed calibrating curve.



Measuring principle

HANDYBOY works in accordance with the principle of an open plate capacitor. The capacity of the capacitor depends on the material- (dielectric)-constant of the material in between the plates. Compared with air, for example ($\epsilon_r \approx 1$) water has got a very high dielectric-constant ($\epsilon_r \approx 80$). The water content of a wet material can therefore be determined by determining the dielectric constant of this material.



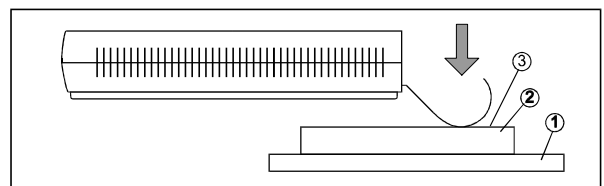
① field lines

② material to be measured

③ plate capacitor

Measurement Preparation

- **material thicknesses < 5 cm ②:** use suitable bases
(for example: polystyrene or foamed plastic plates
- **no metal!**)
materials (< 2 cm) ②: measure on a pile
(pile thickness at least 2 cm, avoid air gaps between the individual layers)
- look for an **even, smooth surface ③**
(minimum size for the measurement 10 x 10 cm)

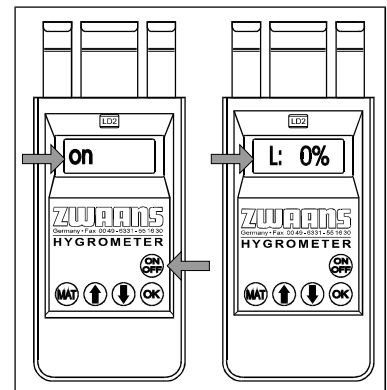


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- **minimum distance of the electrodes** from the edge of the surface: 1 cm

Switch on the meter

- push ON/OFF-button, it shows „on“ in the display, and hold the meter in the air so that the zero point measurement / correction can be carried out.
- release ON/OFF-button, the display shows „L: 0%“.
The meter is ready for use.

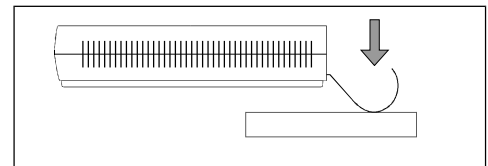


Measuring

- press the meter on the material
- read the moisture value
- the meter holds the reading for several seconds

Note:

For measuring above 45% put a plastic foil on the surface of the leather to avoid a short-circuit caused by a water film.



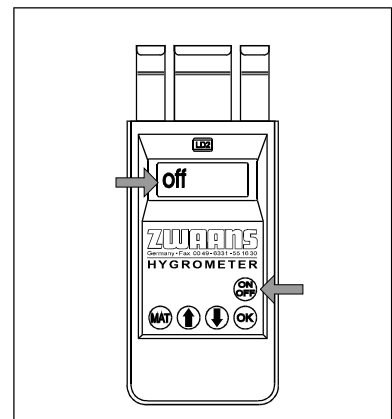
Switch off the meter:

- push ON/OFF-button till the display shows „off“
- release the ON/OFF-button, the meter is turned off.

If no measurement is carried out for one minute, the meter turns off automatically.

Checking measuring quality

We recommend to carry out regular periodical control measurements in accordance with our testblock PE05, as different local circumstances may be of influence. Tests and controls with our Certificate for testblock PE05 makes HANDYBOY in accordance with ISO 9000! (Recommendation: controlling measurements by drying method DIN 52182 or DIN ISO 287)



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Battery

The meter works with a commercial 9V block battery. The capacity of which is continuously controlled. If the battery is running low, the display shows a „B“ instead of the „%“ on the final position.

Change battery

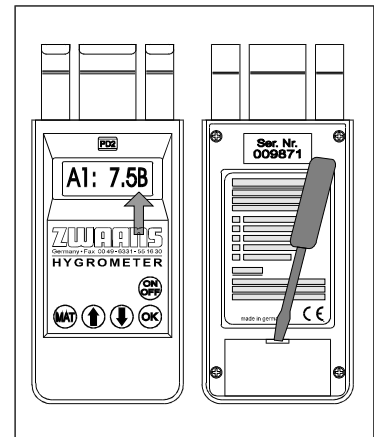
- Open the battery box for example with a small screw driver
- take out the battery
- insert new battery and connect it to the battery clip in the correct polarity

Attention!

Dispose of the battery in a proper, environmentally friendly manner !

Our operating instructions are intended for guidance and to provide information on our products and their uses. They should not be taken to imply special characteristics or suitability for any specific purpose, other than those stated.

We constantly work to improve our products and reserve the right to alter our products and operating instructions without advanced notification.



Optional extras

- test block PE05 to check the sensitivity of the moisture meter
- battery charger with rechargeable battery
- different types of moisture meters
- special calibration of the moisture meter
- strong, tight fitting, leather bag giving protection whilst in use

Safety tips:

- Pay attention to the operation instruction
- Only use the meter as per our instructions
- Keep the meter away from live and current carrying parts
- Keep the meter dry
- Avoid impacts
- Protect the meter from heat
- Protect the instrument from electrostatic discharge
- Protect the meter from foreign bodies entering the openings of the housing
- Repairs maintenance only by qualified specialists

