

# CAISSON

*Measuring equipment*

## VI-D6 Woodmoisture meter

### INTRODUCTION

The VI-D6 meter is designed for measurement of moisture in wood (and building materials, provided that they are not conductive).

### TECHNICAL DETAILS

- **Dimensions:** 147 x 89 x 33mm
  - **Power supply:** 2 x AA batteries
  - **Average working time:** 20 hours with a complete set of new batteries
  - **Display:** graphic monochrome 128x64 pixels, size 61 x 33mm with illumination
  - **Operating temperature range:** 5°C – 40°C
  - **Accuracy:**  $\pm 0.5\%$
  - **Weight:** 215g
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- Non-destructive measurement
  - Sensor placed on front side
  - Microprocessor control
  - Woodtype and wood-density adjustable in display
  - Max Hold function
  - Woodtype-table adjustable per language
  - Auto Power OFF
  - Plastic case



### INSTRUCTIONS

1. Take the CAISSON meter out of the pouch.
2. Open the battery holder and insert the batteries (2 x AA 1.5 Volt). Close the holder.
3. Push the left button POWER ON. In the open air the meter will indicate a value of around 0.3. When the display indicates „BATTERY LOW”, the battery should be replaced.
4. Place the front end of the meter in the middle of a level part (at least 10cm. square) of the material to be investigated. For wood the measurement should be made in the grain direction, as a measurement made more or less transverse on the grain direction gives a lower indication. The measurement direction is formed by the brand name CAISSON (coinciding with the grain direction).



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## GENERAL PRINCIPALS OF OPERATION

The meter works by means of a electric field which will be influenced by water content of the material and the density of the material itself. The relative measurements are displayed in the 15.00 scale in the right upper level of the display. Through selection on the front panel (<, > a type of wood or a wood-density (indicated by D and a range in kg per cubic meter) can be selected. The microcontroller calculates the corresponding moisture content in percents. If the display shows --.-%, the value is outside the range of the instrument (7 to 40%). Selectable woodytypes may vary per region. The instrument gives values up to 40%, above 20% however values may be incorrect if the wood has a moist content above the fibre saturation point.



## INDICATIONS

In general the read-out should be interpreted as follows:

### WOOD

- 0 – 12% = DRY: a finishing coat can be applied.
- 12 – 20% = AIR DRY: a finishing coat can only be applied with painting systems that tolerate a base moisture content up to about 20%. The meter indicates: „moist”.
- 20 – 30% = WIND DRY: treatment can only take place with good moisture-permeable media. When applying a number of coats, we recommend that you should wait for a drying time or a decrease in the result of the device.
- 30% and higher = WET: treatment is in principle only possible with a painting system that is suitable for wet wood.

The CAISSON meter gives an indication of the moisture present in any species of coniferous or deciduous tree up to about 2 cm deep.

For concrete, anhydrite and polyester/GRP the readings are given in percentages. The indications ‘wet’, ‘moist’ and ‘dry’ are just given as a general guideline and need proper interpretation based on experience.

## SWITCHING-OFF

Press the two buttons on the device simultaneously. In MENU select <TURN OFF>. The instrument will otherwise power down after 10 minutes.

## HOLD

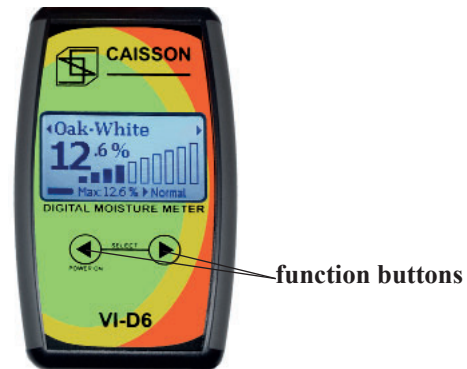
If the right „>” button on the panel is pushed for more than 2 seconds the meter enters the ‘hold’ mode and retains the highest measured value for 60 seconds. A black square will appear in the display beside the %-sign. By pushing the button again the ‘hold’ mode is left.



## SETUP MENU

The setup menu is activated when the instrument is switched-on and at the same time the pushbuttons <, > are both pressed till the Setup menu appears. This menu contains several topics, you can go through them with the pushbuttons, the various possible actions are indicated by the „<“ (next option) and „>“ (confirm) signs.

1. **Densities:** selection of the density scale.
2. **Backlight:** the degree of backlight of the display.
3. **Turn off.**
4. **Defaults:** restoring the default settings.
5. **Language:** language selection.
6. **Sound.**
7. **Alarm.**
8. **Invert screen.**
9. **Exit:** return to the work module.



## GENERAL

The meter reacts to metal in the same way as it does to moisture. If in the material to be investigated there is, for example, a nail, reinforcement or other metal object within the radiation range, the meter gives a too-high result. A correct indication is therefore impossible. When the CAISSON meter is not used for a prolonged period of time, we recommend to remove the battery. We do not accept any responsibility for damage that may result from wrong or improper use, or from interpreting the meter as a measuring instrument. Protect the meter from bright sunlight, heat, water, snow or ice.

## WARRANTY

Notwithstanding the statutory warranty claims, CAISSON provides a warranty in accordance with the laws of the Customer's country for a period of at least two years from the date of sale of the device to the end user. The warranty covers only those faults which are caused by defects in material or workmanship. A warranty claim must be accompanied by a proof of purchase with the date of sale specified. Warranty repairs shall be performed only by an authorized distributor of CAISSON. The following are excluded from the warranty:

- misuse;
- use of force, damage caused by external factors or foreign bodies such as sand or water;
- damage caused by failure to comply with the instructions for use;
- normal wear and tear.

The warranty also excludes devices that are partially or entirely disassembled.