

wood it is best, if to pull it out, you slide something (like a screwdriver) between the electrode and the wood. This will prevent the needles from bending.

- (b) It is also possible to beat the hammer electrode into the wood with a normal hammer.
- (c) When measuring a very thick timber you can use nails of appropriate length and ϕ 2-3 mm. You should beat the nails into the wood. The distance between them should be 25 mm. A line drawn between them should be perpendicular to the fibres in the wood. Then touch the nail heads with the needles of the hand electrode, turn on the moisture meter and read the result. However the measurement done in this way is less accurate.
- (d) When measuring a very dry wood:
 - do the measurements in a place where the electromagnetic interference is minimal (away from electric engines, high voltage wires etc.),
 - do not move the device or its cable during the measurement,
 - use as thin needles as possible as they provide a better contact with the wood.

10. GUARANTEE AND SERVICE

TANEL Electronic warrants the Moisture Meter WRD-100 to be free from malfunction and defects in both materials and workmanship for one year (12 months) from the date of purchase.

If the Moisture Meter WRD-100 does not function properly during the warranty period due to defects in either materials or workmanship, our company will, at its option, either repair or replace the instrument without charge, subject to the conditions and limitations stated herein. Such repair service will include any necessary adjustments and replacement part.

Limitations

This warranty becomes null and void if you fail to pack your WRD-100 in a manner consistent with the original product packaging a damage occurs during product shipment.

This warranty does not cover: circumstance beyond our company's control; service required as the result of unauthorized modifications or service; misuse, abuse; failure to follow our company operating or maintenance instructions. Repair or replacement without charge is our company's only obligation under this warranty. Our company will not be responsible for any special, consequential or incidental damages resulting from the purchase, use, or improper functioning of this equipment regardless of the cause. Such damages for which our company's will not be responsible include, but are not limited to, loss of revenue or profit, downtime costs, loss of use of the equipment, cost of any substitute equipment, facilities of services, or claims of your customers for such damages.

Important

We recommend to prevent faulty result in measurements please check your meter reading results within a adequate time period by the dry oven test according DIN 52 183 Standard.

GUARANTEE

The manufacturer guarantees the correct functioning of the Wood Moisture Meter WRD-100 under normal use for a period of 12 months:

Serial number

Production date

Date of purchase



**USERS MANUAL
WOOD MOISTURE METER
WRD-100**



**TANEL Electronics & IT
General Partnership**

Poland, 44-100 Gliwice,
ul. Kopernika 121
tel./fax +48 32 234-96-15,
+48 32 238-16-15
email: info@tanel.com.pl

1. DECIPTION AND APPLICATIONS

Wood Moisture Meter WRD-100 is a sophisticated electronic device for measuring moisture in wood from 6% to 100% of moisture contents. It can measure moisture in 11 different types of wood: pine, spruce, fir, great maple, birch, maple, ash, walnut, oak, beech and poplar. The Moisture Meter is equipped with temperature compensation control knob. The Moisture Meter is also equipped with a hand and a Hammer Electrode and in addition it can be equipped with an Inertial Electrode EB-1

Moisture Meter WRD-100 is widely used in wood industry, forestry and other industries utilising wood.

2. TECHNICAL DATA

Range	6 % - 100 % moisture contents
Number of wood types	11
Wood temp. range	0° - 50° C
Display type	LCD
Power	1 * 9V (1 battery 6F22)
Battery life	about 10.000 measurements
Size	
instrument	33 * 80 * 165 mm
case	80 * 180 * 250 mm
Electrodes	hand ϕ 2*6 mm hammer ϕ 4*12 mm or ϕ 2*8 mm
Weight	1.4 kG

3. PREPARING THE INSTRUMENT

- Before the measurement you should connect the moisture meter with one of the electrodes. with coaxial cable provided.
- Set the "WOOD TYPE" switch to the appropriate wood type and the "WOOD TEMPERATURE" switch to the measured (or approximate) wood temperature.

4. SELECTING THE ELECTRODE

- We recommend that the length of the needles you use should be about 25-30 % of the thickness of the timber.
- To measure wood with a high moisture contents you should use the hammer electrode with long needles. A dry wood should be measured with the hand electrode (or the hammer electrode with short needles).

5. MEASUREMENT

To conduct measurements do the following:

- Beat the electrode into the wood. A line drawn between the needles should be perpendicular to the fibres in the wood.
- Press the power switch.
- Read the result on the LCD.

If the moisture contents is lower than 6% a sign „LO” appears on the LCD, if the moisture contents is higher than 99.9% - „HI” is displayed.

While conducting the measurements you should observe the following rules:

- Do the measurement in the middle of the timber not closer than 0.5 m from each end.
- Do not make the measurements where there are defects in the wood.
- You should make from 2 to 4 measurements on each side of the timber.

- In each spot you should make not less than 3 separate measurements 10 - 15 mm apart.
- The final result is the arithmetic average of the results.

6. MEASURING VERY DRY WOOD

Measurements of moisture contents in a very dry wood (below 10%) are subject to interference. This can be observed when the result of the measurement becomes unstable. The sources of the interference are electrostatic charges and electromagnetic fields. Often the measurements of very dry wood are conducted in a very dry environment (below 30% RH) and this additionally increases the problem.

When measuring a very dry wood:

- do the measurements in a place where the electromagnetic interference is minimal (away from electric engines, high voltage wires etc.),
- do not walk around the device,
- use thin needles because they provide a better contact with the wood,
- in extremely difficult conditions place the timber on a grounded metal plate or wire mesh.

7. CHANGING THE BATTERIES AND STORAGE

The instrument is equipped with a power level control unit. When the power drops below acceptable level a sign "LO BAT" appears on the left side of the LCD. This indicates that the battery has expired and should be replaced with a new one.

To replace the battery unscrew the screw on the back of the instrument and carefully remove the back panel. Store the device in a dry place.

8. ADDITIONAL INFORMATION.

- (a) The most common cause of bending or breaking the needles in the hammer electrode is an incorrect way of pulling it out of the wood. With long needles and hard