

Considerations/Tips

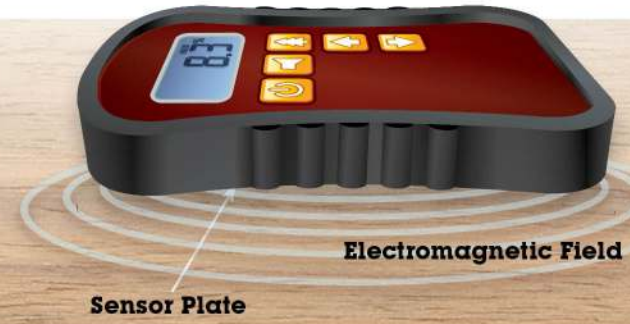
- Moisture meters read moisture content in the 5% to 30% range.
- Low moisture readings are in the 5% to 12% range; moderate moisture is in the 13% to 17% range; high moisture is above 17%.
- Pinless meters are generally not affected by temperature. For pin meters that don't have temperature corrections built in, you will need to make manual corrections.
- Ensure there is no metal embedded in the wood you're testing.
- Take multiple readings at different locations on the wood – moisture may be distributed unevenly in a piece of wood.
- A moisture meter is usually calibrated for one type of wood (typically Douglas fir). If your meter doesn't have built-in species correction capability, use a species correction table when scanning different wood species.
- Regularly check the accuracy of your moisture meter.

Pinless Meter

Pinless meters emit electromagnetic radio waves that scan wood to determine its moisture content. Unlike pin meters, they don't damage the surface of wood. Some meters scan at dual depths (1/4" and 3/4"); others up to 1-1/2" deep. Meter readings are affected by the specific gravity of the wood. A wood species with a higher specific

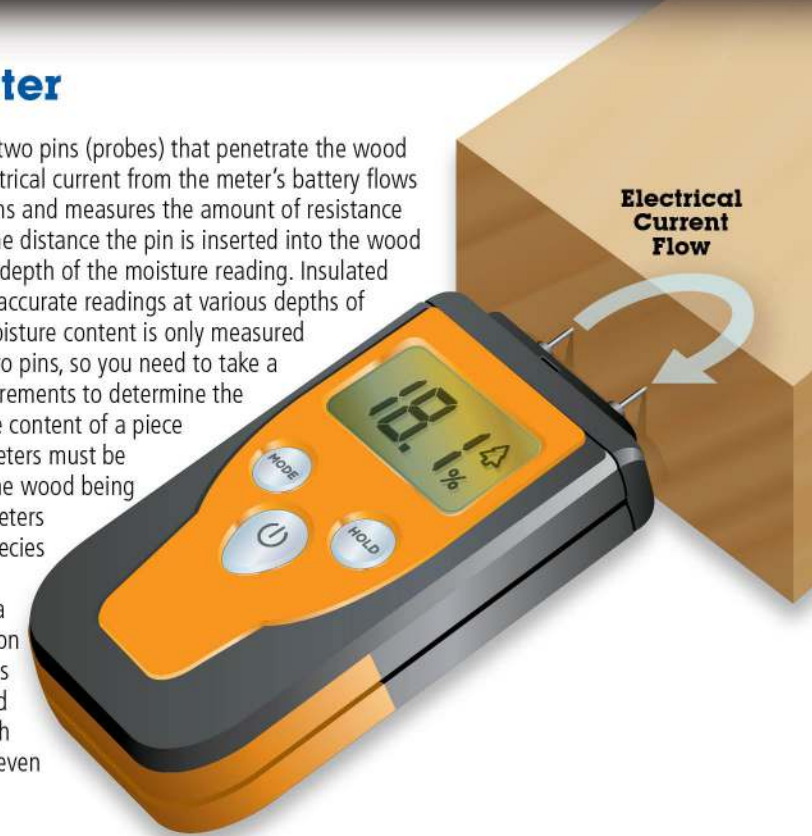


gravity will display a higher moisture reading than a wood species with a lower specific gravity at the same moisture content, so corrections for species need to be made. Some meters have built-in species corrections; otherwise, you need to calibrate the meter for the specific gravity value of the wood you're scanning. Some pinless meters are Bluetooth-enabled. Others have built-in temperature and humidity sensors. Pinless meters are better for scanning large, flat surfaces or when you don't want to damage the wood surface with pin holes.



Pin Meter

Pin meters use two pins (probes) that penetrate the wood surface. An electrical current from the meter's battery flows between the pins and measures the amount of resistance encountered. The distance the pin is inserted into the wood determines the depth of the moisture reading. Insulated pins give more accurate readings at various depths of penetration. Moisture content is only measured between the two pins, so you need to take a range of measurements to determine the overall moisture content of a piece of wood. Pin meters must be calibrated for the wood being tested. Some meters have built-in species corrections; otherwise, use a species correction table. Pin meters are better suited for testing rough lumber with uneven surfaces.



Moisture Level to Aim For

Wood will almost constantly be either accepting or giving off moisture. The only time wood isn't doing this is when the relative humidity levels of the air align with the current moisture content of the wood. When this happens, the wood is said to have reached "equilibrium moisture content," but this state rarely lasts for long, as the relative humidity in the air will surely change soon.

You want the wood in your shop to reach, or be very close to, its equilibrium moisture content before using it.

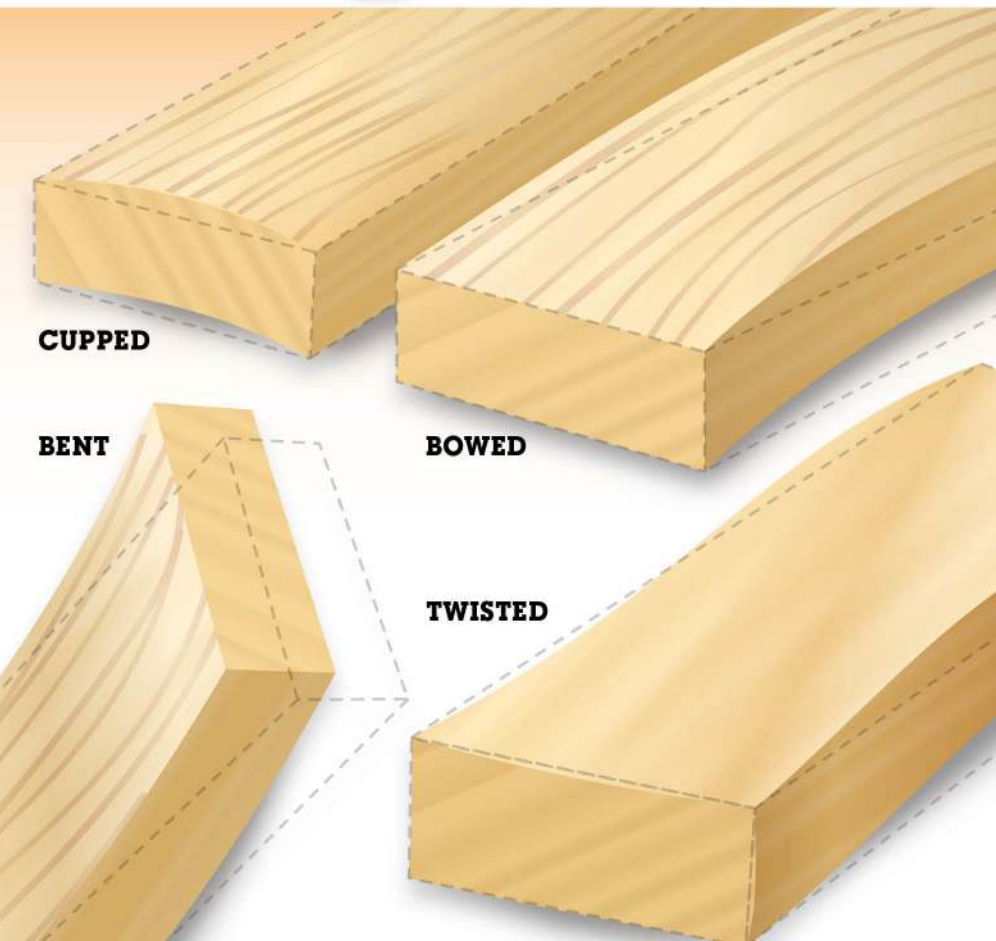
As humidity increases, the moisture content in wood increases, causing wood to expand. As humidity decreases, the moisture content decreases, causing the wood to shrink. The table below shows the ideal moisture content for your wood at various humidity levels.

Humidity Level in Your Shop	Ideal Equilibrium Moisture Content Level for Your Wood
19-25%	5%
26-32%	6%
33-39%	7%
40-46%	8%
47-52%	9%

Source: Wagner Meters

Acclimate Wood

- Improperly dried wood can cup, bow, twist or bend.
- Wood can pick up extraneous moisture between the time you buy it, transport it to your shop and then use it.
- If storing wood horizontally, stack and sticker it to provide adequate air flow.
- If storing wood vertically, raise it slightly off the floor to facilitate air flow and support it at the top and bottom to prevent bowing
- Avoid placing wood near a heat source or in direct sunlight.
- Don't subject your wood to temperature extremes (keep your shop at a consistent temperature, particularly during winter months).
- Before milling the wood, allow it to reach its optimal equilibrium moisture content in your shop.
- Moisture content close to the center may exceed that at the surface. When milling wood, plane both faces equally and then give the wood time to stabilize before using it.
- Do any final milling just before you use the wood.



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