



## DO YOU KNOW THE RELATIONSHIP BETWEEN AMBIENT TEMPERATURE, RELATIVE HUMIDITY IN THE AIR AND WOOD MOISTURE?

Air affects the moisture in wood. Moisture problems such as shrinkage, cracking and warpage are caused whenever wood starts working on its own by picking up moisture in a damp place or by losing moisture in a dry place. See what happens to wood moisture in the different environments below.

*Ideal environmental conditions :*

*( for wood, for your health and for your shop )*

Ambient temperature: 20° to 25 °C = (68° to 77 °F)

Relative humidity in the air: 35% to 45%

The wood moisture level will set itself at: 7% to 12%

The **summer** environment, hot and humid:

Ambient temperature: 30 °C = (86 °F)

Relative humidity in the air: 65% to 75%

The wood moisture level will set itself at: 14% to 18%

The dry **winter** climate, cold and dry:

Ambient temperature: 0 °C = (32 °F)

Relative humidity in the air: 20%

The wood moisture level will set itself at: 5% to 7%

In order to ensure the stability of the furniture you are building it is important to reproduce the environment in which the piece will be installed.



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### *Checking and Cracking Problems*

Checking and Cracking of the faces of veneers sheets is basically caused by loss of moisture in the veneer, resulting in shrinkage of this component. The dimensional changes in the face and the core may provoke warpage and surface cracking. When these forces reach the point where they exceed the structural strength of the veneer, rupture of the fibres takes place. This effect, shows up as a check or split on the surface. These checks naturally follow the weak zones such as lathe checks, pores or splices in the veneer.

### *Cracking is an environmental issue:*

It is a known fact that this condition commonly occurs during periods of low humidity. Furniture subjected to dry heat during this time of year tends to dry out or lose moisture. The greater the loss of moisture, the greater the shrinkage and resulting stresses.