# PAPER MILLS AND WOODWORKING

**Paper production and woodworking, such as their storage, either, benefit from environment control.**

Italfog humidification systems:
low energy consumption, minimum operating costs, low noise level.

## WOOD:

Wood is a hygroscopic material, that absorbes or releases water depending on the relative humidity.
In high relative humidity conditions, wood absorbes humidity, until obtaining the same level of the surrounding air.
During the 2/3rds of the year, the relative humidity is insufficient for manufacturing and varnishing processes.
Misting systems maintain the proper moisture content inside the wood fibers and efficiently reduce many of the quality problems associated with woodworking, preventing: shrinkage, swelling, deformations, splits and cracks. These situations are caused by different humidity values, varnish diffusion problems, static electricity and dust.

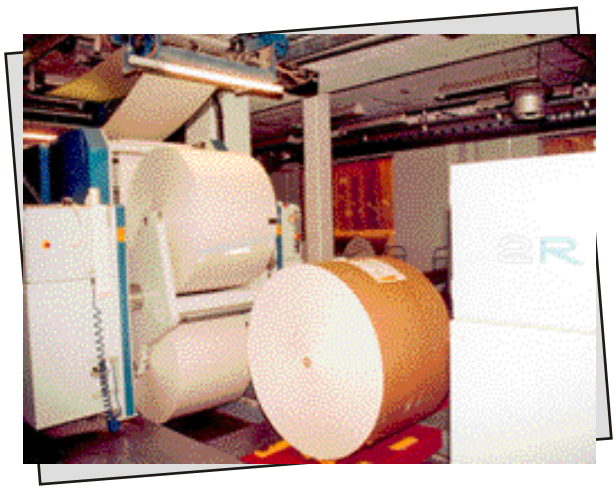
A relative humidity in the measure of 50-55% RH is of great importance:

- **The dimensions of wood hold steady**
- **Manufacturing process is more efficient**
- **Increase in processing speed**
- **Increase in tool life**
- **Shorter production stops**

The result is a higher quality of the product with higher profit margins.
Dust explosions and fire considerably reduce, by increasing humidity levels.
Airborne dust can be reduced in the measure of more than 70% and in some cases totally eliminated.
In addition, the resulting evaporative cooling guarantees a better working environment and a well-being feeling more effective than the conventional cooling methods.

## PAPER:

The paper-based products gain and lose moisture rapidly: for this reason a properly stabilized humidity level is crucial to obtain an excellent steady quality final product.
A proper humidity level is very important to the entire printing process.
As far as paper, board and other cellulose-based products, the best climate is 20-21°C and a relative humidity moving from 50% to 55%.
Heating and heat produced by machinery themselves create, during winter months mainly, critical levels of humidity in the environment and consequently serious complications to the manufacturing process.



## BENEFITS for PAPER MILLS and PRESS

- **Increase in output speed**
- **Removal of static electricity**
- **Minimization of scraps and downtime**
- **Reduction in curl and deformations**
- **Improvement in quality folding mechanical process as regards paper and board**
- **Improvement in flexibility and dimensional stability**
- **Better ink transfer**
- **Dust reduction**
- **Better climate conditions**