Dry Air Systems for the Cork Industry

Munters dehumidification systems offer dry air solutions to solve condensation problems in the cork industry. The most common applications in this sector are the drying of cork bottle stoppers, the drying of cork shavings, shavings storage silos and raw material warehouses.

Drying of Cork Bottle Stoppers

Cork bottle stoppers must have a specific amount of water when used in bottling in order to perform correctly. Water content in the cork is, generally, around 7%. However, during stopper production moisture content levels in the cork are higher than will be required later. Therefore, a final drying phase is needed.

Traditionally, the drying phase was carried out by ventilation, nevertheless, environmental conditions do not always cooperate. Variations in environmental humidity cause drying times to vary widely, thus creating possible delays in the delivery of orders. Experience shows that heating the air is not a good solution since the surface of the product can be damaged.

Munters desiccant dehumidification systems eliminate water vapour in the air. When stoppers enter a dry environment, the moisture contained within them dissipates into the atmosphere.

With this process we obtain:

* A much more rapid drying time reducing weeks of drying into just a few days or even hours

* A more intense and uniform drying obtaining moisture levels of 5% or less

Drying of Cork Shavings

In order for different production processes to be carried out correctly, cork shavings must be dried to a precise amount of moisture for each of the different phases.

The traditional method submits cork shavings to a hot-air treatment for a certain period of time. The hot air heats the cork causing part of its water content to be eliminated. Then, before going onto the next phase, shavings must be cooled. There are inconveniences to this procedure, which are non-uniform drying times and intensity differences due to variations in air humidity.

The Munters drying method is based on desiccant dehumidification of air.

Since cork shavings are exposed to a very low water-vapour environment, the moisture contained within the shavings tends to dissipate into the atmosphere.

Cork Industry

BENEFITS

- **Reduced drying times**
- **More intense and uniform drying obtaining moisture levels of 5% or less**
- **Less energy consumption**
- **Reduced maintenance costs**
- **Prevents mould and mildew**

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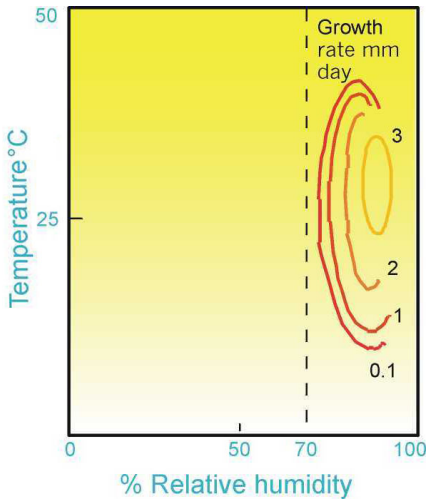
The Humidity Expert



The advantages are:

* A lower temperature, preventing wait times

* A more intense and regular drying than one obtained through simply heating

* Less energy consumption due to the lower temperature employed

Cork Shavings Silos

Cork shavings are, generally, stored in silos on the outside of industrial buildings. The water content of the cork is often higher when taken from the silo, than it was when first stored. The problem is due to the water vapour present in the air surrounding the cork during the loading process.

Also, due to the outdoor humidity and temperature changes, the shavings are exposed to strong increase in moisture on the inside of the silo from condensation on the wall and ceillings. When the water vapour in the atmosphere of the silo is near to or reaches its saturation point the cork tends to absorb a portion of it.

To avoid the effects of humidity, a small amount of dehumidified air using the Munters system is supplied into the silo.

With the process we obtain:
* Assurance that the cork doesn't increase in moisture content, irregardless of outdoor conditions

* Reduction in the moisture content of cork conserving its condition

* Savings in costly investment in isolation

* Reduction in maintenance costs of the silo

Raw Material Warehouses

In order for the raw material to have optimal conditions for quality and handling it must pass through a washing process. After this washing process, the raw material contains water proportions which, on occasion, must not decrease until, at least, after the manipulation process has been completed.

The raw material is then stored in a building without hardly any ventilation thus yielding a higher humidity level. Under these conditions, a layer of mould grows on the stored product. The appearance of mould and mildew is a spontaneous process at humidity levels above 85%. Therefore, if humidity levels are kept under 85%, the growth of mould and mildew can be prevented.

Munters dehumidification systems rigorously control humidity levels at any temperature, thus
* Preventing the growth of mould and mildew

* Prevention of alterations in moisture content of the raw material

How do Munters Systems operate?

Munters dehumidification systems retain the water vapour in the air by passing it through a desiccant rotor that acts as a humidity filter.

Munters system dehydrates the air irregardless of the temperature thus obtaining conditions that are difficult to achieve using other technology.

Tap into your local Munters Humidity Experts by contacting your local office or read more about our solutions at www.munters.com/food

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