



Magna Engineers

Tea Industry Humidification





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The essential criteria for making quality tea is to minimize the moisture loss from the tea leaves from the rupturing point in the Rotor vane / CTC / CFM's or Rolling tables up to the Dryer feed end. For best quality and productivity it is imperative that this moisture loss is kept at the minimum possible level. The warmer, drier the ambient air of the production area the faster the moisture loss from the tea. Maintaining correct humidity levels, uniformly in the production area like CTC room and CFM room, will arrest the moisture loss from tea which will immensely improve quality.

Drastic moisture loss takes place in the CTC / CFM Rooms because these rooms get extremely hot due to high installed electric load of the machines as well as the solar heat gains through roof and infiltration. Humidity decreases drastically leading to rapid moisture loss from the tea under process in the CTC and CFM rooms within a very short time if the Humidity functions of increasing the RH and reducing ambient temperature system is not installed in the tea processing area.

In a fermenting room where 90 - 95% RH is required to be maintained, the air is always very near saturation i.e. the dew point temperature. Precision engineered, fully automatic "Hydromist" humidification systems can only maintain the desired conditions without wetting / condensation as experienced with manually operated centrifugal spinning disk humidifiers or semi-central Air Handling Units, commonly used in the tea factories. AHUs which are used to supply humidified air to the fermenting machines or to fermenting rooms, can never give the desired 90-95% RH where it is required. Proper Systematic humidification in tea during the fermentation process allows oxidization to fully occur as the high humidity prevents the tea from losing moisture to the air. If the tea dries then the fermentation process is impaired as oxidization only occurs in the presence of moisture.

By maintaining a more consistent humidity in the rolling, cutting and fermentation areas the liquor of the tea is greatly improved and the amount of low quality refuse tea is reduced by up to 50%, when compared to standard spinning disc humidification systems. This results in a better quality tea allowing the product to command a higher price at market.



Methods of Humidification

By using a “Hydromist” High pressure water humidifier the entire rolling room is kept optimally humidified. The cooling effect from the evaporation of the moisture also helps to control the increase in temperature the tea experiences during this process.

Our Customers like M/s.Woodbriar Group, Valparai & Nilgiris, Tamilnadu, M/s. Harrison Malayalam Ltd, Wallardie, Kerala M/s.Soongachi Tea factory, Dooars, Siliguri, M/s.Daspara Tea Factory, Siliguri the above mentioned customer have positively commented, "The teas are jet black after the commissioning of the humidification system. There is a vast improvement in the liquors of the tea and an improvement in the density of teas." The “Hydromist” humidifier is fully automatic, with low running costs, no drips or droplets and hygienic, safe operation. This makes it the number one choice for tea applications worldwide.



“Hydromist” humidification systems have been humidifying industries and air handling systems around the world for over 10 years. Continually developed to incorporate the latest in controls, hygiene and environmentally sound technology, the “Hydromist” is the leading water atomising humidifier.

“Hydromist” precision engineered misting nozzles have the lowest water consumption for any humidifier. The drip-free nozzles produce sprays of just 5-10µm and are built to last long. The control panel uses the latest remote digital interface, which can be mounted up to 100m away from the main control unit. The whole system is very easy to install and can run on medium of water like: R.O, D.M or Distilled Water. Regular maintenance is minimal and often comprises of just an annual check, making the “Hydromist” ideal for use in busy industrial environments.



Remote interface

Microprocessor controlled units have an easy-to-read interface, which shows operational status and makes commissioning simple. Set point, ambient humidity and temperature, purge and flush cycle operation, hours run, service interval times, occupancy operation is shown. The display can be installed up to 100m away from the control panel.

For improved control in large areas, up to three averaging humidity sensors can be connected to the microprocessor controller or it can be linked to a building management system. On/off and modulating control is available on high capacity systems allowing $\pm 2\%$ rH control. Modulating systems also incorporate information on water flow.

Features

Humidity Enhancement & Control

Reduces Ambient Temperature

Low Energy Consumption

Low Running Costs

Low Maintenance

Significant Cooling effect

Anti - Drip Nozzles

Lowest Water Consumption Atomizing Humidifier

Environmentally Friendly



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