

EVAPORATIVE COOLING SYSTEM IMPROVE WORKING CONDITIONS

AGRI-FOOD



ISSUE :

In the agri-food industry, there may be multiple heat sources generated by the process or by the product itself.

There are multiple issues arising from heat generation inside a flavoured crisp production facility. The manufacturing process for flavoured crisps creates a humid environment, with a constant flow of hot air during the production run. Heat is emitted throughout the entire process: potato slicers, high-temperature fryers and the process for bringing the fryer vats up to temperature.

This significant heat generated within the production workshops results in an uncomfortable working environment with reduced rates of production and levels of productivity, which may be linked to sustained stresses and longer break times.

The issue required a solution that would enable operatives to work in a clean environment, with a pleasant flow of fresh air, thus improving their working conditions.



SOLUTION :

Econoclim B is a cooled air ventilation system that is capable of processing 10,000 m³/h. The equipment was installed in the roof of the premises to guarantee that the temperature never rises above 35°C. The air circulation channels and operative locations were identified, to ensure that only the operative zones and specific zones requiring a sensation of cooled air flow were cooled, thus creating a comfortable environment.

25 **Econoclim B** units were installed inside the production facility. They were connected by textile ducts which allow the zones to be ventilated with a high degree of accuracy. They were installed at a height of 2.5m to 3m in order to diffuse the air nearer to the operatives.

Installing the **Econoclim** units has generated a pleasant flow of cooled air. The blown air temperature is lowered by 6 to 10 degrees. Evaporative air conditioning slightly humidifies the general environment with tiny particles of water so that the air being breathed is not dry and subsequently does not dry the operatives' throats.