

CASE STUDY

EVAPORATIVE COOLING SYSTEM FOR A FOOD PRODUCTION COMPANY FOOD INDUSTRY



THE NEED:

The customer carried out a study of its existing ventilation system. This analysis highlighted the need to upgrade the ventilation system in phase A of its in-house production project.

The main objectives were to:

- Improve thermal comfort in production and packaging areas.
- Guarantee optimum indoor air (maximum temperature of 26°C, humidity management, prevention of condensation and oil mist).
- Optimise Delta Neu's existing ventilation units.
- Minimise the acoustic impact of the system (sound measurements planned before and after installation).
- Comply with health and safety standards (VDI 6022 requirements, installation of insects barrier on extraction units).
- Guarantee simplified maintenance and effective monitoring to limit production interruptions.

THE SOLUTION:

Installation of an adiabatic ventilation system based on Econoclim C technology, supplemented by Extractair extraction units to guarantee an optimal working environment in the areas concerned.

Main features of the solution:

Adiabatic ventilation with Econoclim C 20/40 :

- Generation of cool air by evaporation of water for efficient, energy-saving cooling, with a flow rate of **40,000 m³/h** per unit.
- Low power consumption (15 kW per unit).
- Stainless steel structure for durability and ease of maintenance.
- Two-stage filtration: **G4 pre-filter and F7 filter** (55% PM1 efficiency).
- Extraction system with Extractair H90 : Low-speed fans to reduce wear and noise.
- Insects' barrier with the G4 filter and filtration system to ensure extracted air. Integrates into existing structure for efficient installation.

Air distribution via textile ducts adapted to the needs of each production area and distribution of a uniform air flow.

