

Ferrero Cork save 46.1% on annual energy running costs with Munters MDU

With energy at the top of the agenda for the process industry, manufactures are constantly looking for ways to increase efficiency.

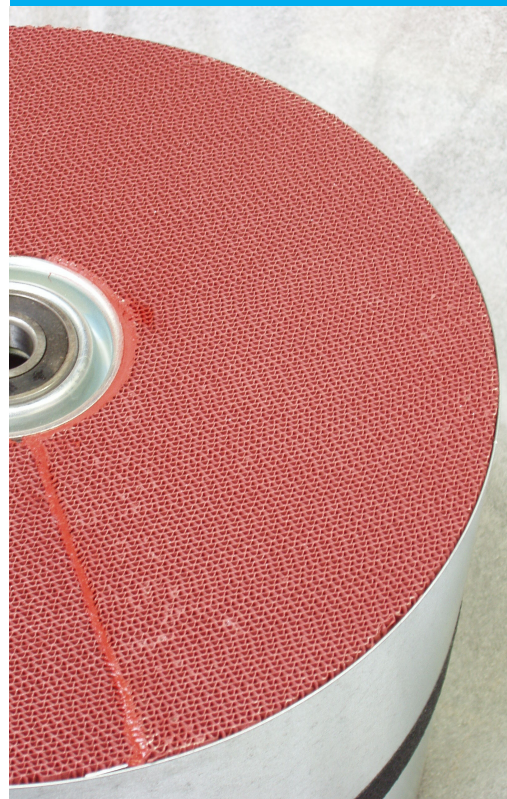
Ferrero Ireland has recently installed a Munters MDU system to achieve annual energy savings of 46.1%. Ferrero Ireland located in Cork manufacture the internationally famous Tic Tac sugar confectionery. The site is setting a new standard of excellence in energy efficient production by installing an optimised Munters MDU system.

As part of a global energy saving project, Ferrero required increased efficiency within their pan coating process. With spiralling fuel costs putting pressure on today's business a commitment was made to take a proactive approach on meeting energy reduction targets when updating their coating operation.

Ferrero's aim is to decrease the amount of energy used per tonne of manufactured product to minimise the effect on climate change, so they decided to look at the latest desiccant technology from Munters when upgrading their pan coating system.



Energy efficient operation



Benefits

- Optimised performance, quality and reliability
- High energy efficiency
- High capacity at ultra low dewpoints
- Hygienic construction
- In-house global service support



The Humidity Expert



Having looked at the required design conditions and working closely with Munters, Ferrero calculated the energy consumption and capital costs of Munters system versus their current refrigeration system. Initially the calculated savings seemed too good to be true, but they soon realised Munters proved in many other applications, that the MDU systems are purpose designed to optimise energy.

Ferrero's original refrigeration system supplied 11,000 m³/hr and could only dry down to 4.5g/kg. The ultra dry air supplied during the Tic Tac coating process ensures improved product quality and a high potential to reduce batch drying. The new drying system is capable of supplying 13,000 m³/hr and gives Ferrero increased capacity plus the ability to have ultra dry air even lower than the 4.5g/kg if required.

Working closely with Ferrero, Munters worked with the dual objectives of achieving optimum drying capacity whilst reducing energy costs. The cost analysis performed by Ferrero showed the Munters MDU system is designed to save 46.1% in annual running costs.

Munters standard MDU systems include pre-treatment, dehumidification, post air treatment and reactivation energy optimisation. The factory built systems are fully tested and conform to global standards for AHU's and CE marking. In the Ferrero system Munters provided the fan and motors outside the process air stream to give added hygienic integrity within the coating process and reactivation fans with inverter control.

Whilst Ferrero's main objective is to reduce energy running costs, the flexibility for increased capacity and drier air means Ferrero can achieve a greater range of humidity conditions, so they plan to trial variable conditions to improve batch times.

Energy Cost comparison using Ferrero data and calculations.

Current refrigeration system total energy 346.7Kw

Using energy cost of €0.093 for electric at COP3a

300 days operation = 7200hrs

Annual energy running costs of the current refrigeration system = €69,887

Munters MDU system annual energy running costs €32,222

Annual Energy savings €37,665 (£25,449)

Munters MDU systems are designed to give year round stability, reliable product quality and optimize energy efficiency.

The economic and technical analysis show that the significantly lower annual energy running costs of 46.1% mean the cost of investment in Munters MDU is paid back within 2.75 years.



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