

CASE STUDY

Dairycrest Ltd, Somerset— N₂ Airbox 1 Replaces Bulk Store Tank & N₂ Airbox 2 Accommodates Expansion

PART ONE—REPLACE THE BULK

The Challenge

Dairy Crest is the UK's leading chilled dairy foods company. They manufacture a range of everyday dairy brands including the award-winning Cathedral City cheddar.

Production at the Frome site requires significant volumes of nitrogen and the customer was looking for an alternative to purchasing liquid Nitrogen from a supplier, due to costs and delivery reliability.

Maziaks' Solution

Information gathered during a Maziak site visit, combined with our partnership with the UK's leading manufacturer of nitrogen generation machinery enabled us to recommend and deliver a complete Nitrogen Generator Packaged solution.

A state of the art Nitrogen Generator was installed into a bespoke container (Airbox) which allows for a constant supply of Nitrogen, 24 hrs a day, 365 days per year, at 99.95% purity as required by the customer.

The system was driven by one new 11kW compressor along with a dryer and air treatment package and gives a round the clock variable compressed air delivery of between 0 and 60cfm.

The package was built in Maziaks' workshop and contains all air treatment, air storage, nitrogen storage, ventilation, heating and even its own local distribution board—a complete plug and play solution. This meant an installation time onsite of only 8 hrs.

Results

This Nitrogen container achieved payback in its first year and since then **Dairycrest's nitrogen costs have decreased by a massive 90%**. This solution has also cut the time and effort required to manage their Nitrogen supply.

PART TWO—EXPANSION

The Challenge

Since installing Airbox 1, demand for N₂ at the Frome site has increased significantly due to the processing of an additional product, which Airbox 1 cannot support.

Maziaks' Solution

The cost savings achieved by Airbox 1 were so impressive that Dairycrest opted to build and locate a second Airbox in front of the existing unit.

Once again the entire Airbox was built at Maziaks' Northamptonshire site and then shipped and installed in Frome within 12 working hours, ensuring minimal disruption.

This system of Airboxes allows for the site to cover their full range of nitrogen requirements in the most energy efficient manner.

Results

Dairycrest is expected to continue to benefit from enormous nitrogen cost savings due to the switch from bulk to nitrogen generation onsite.

Client Testimonial

The switch to self generation of nitrogen at our Frome site has had extremely positive results for Dairycrest. We have significantly reduced our nitrogen costs, with a very short payback period and are no longer subject to price fluctuations in the market. We now also have complete control of our nitrogen supply."

Chris Lowe, Engineering Manager



Old Bulk Tank and Evaporator Installation



Inside the FIRST new Nitrogen plant room



TWO New Nitrogen Generator Plantrooms

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