

Savour the Mouth-watering Benefits of On-Demand N₂ Gas Generation

The Challenge

Launched in 2012, the company is on its way to becoming the UK's No.1 chilled pastry supplier, with products that provide convenient, great-tasting home baking solutions. They have clear objectives to use sustainable and locally sourced ingredients. They use 100% sustainable and segregated palm oil across their range and pastry ingredients have low food miles with the majority of their flour milled within 20 miles of their Corby site.

Always on the lookout for further opportunities to reduce carbon footprint and energy costs whilst improving their operation, they turned to Maziak to propose a solution relating to the sourcing of N₂ gas. They use nitrogen flushing on their flow wrapping lines to preserve and protect food from damage during shipping and storage.



Maziaks' Solution

Key outcomes required, included:

1. High quality food grade on-site, on-demand nitrogen gas generation
 - i. Also EIGA and BRC compliant
2. Reduced dependency on bought in bulk liquid (1 delivery per week, 50 weeks per year) and associated reduction in site traffic
3. Reduced cost of production

Maziak proposed an on-site N₂ gas generation system comprising a Parker NITROsource gas generator delivering the gas to multiple production lines using a Parker Transair N₂ pipework food grade aluminium ring main. The LCD function display panel, complete with integral, digital oxygen analyser also offers Economy stand-by control. This means that at low demand the N₂ generators switch to standby mode and use no compressed air. The system was also supplied with a pre-treatment package.



Results

All of the desired outcomes were comprehensively met.

1. **Continuous, on-demand food grade N₂** purity $\leq 0.5\%$ maximum residual O₂ content $>99\%$ balance N₂ + inert trace gases.
2. **No more bulk deliveries**, representing significant cost reductions (expensive and variable costs, tied into a contract). No more impact on site safety of delivery vehicles.
3. **Annual production costs will decrease by over 40%**, with a payback period of under 2 years.

Testimonial

"Maziak's solution will provide a sustainable alternative for food grade nitrogen gas to the bulk liquid supply and also save substantial costs for our new bakery site." **Process Manager**