



			He	
	O	F	Ne	
	P	S	Cl	Ar
	AS	Se	Br	Kr
	Sb	Te	I	Xe
	Antimon	Tellurium	Iodine	Xenon



# NITROSource NEWS 04

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Edition #4 focusses on probably one of the most successful market sectors for Parker on-site gas generation – food production, processing and packaging.

This coincides with a new white paper specifically targeted at confirming Parker NITROSource PSA nitrogen generator fully complies with all the specification requirements under EU law along with recommendations from EIGA, (European Industrial gases Association), for the safe use of on-site gas generation within food applications.

It is very important for end users to understand that there is a lot more to using gas generation for food applications than just the nitrogen purity. There are significant considerations concerning labelling, HACCP analysis for compressed air source / nitrogen contaminants, materials of construction, traceability, hygienic servicing regimes as well as protecting the entire system integrity from the potential occurrence of a fault situation.

If we can fully understand these requirements and lead customers through our expertise, we will create significant leverage over our competition.

The white paper has been compiled through in-depth analysis of European food law and EIGA documentation to extract all the pertinent points relevant to demonstrating the full compliance of NITROSource PSA.

The aim is to provide you with as many tools as we can to help guide the end user through every stage of a food grade application from specification and pre-qualification to commissioning and on-going support, enabling successful compliance with the most stringent of 3rd party audits, the thing most end user fear.

**In the application article provided by our distributor in Italy, Ferrari Srl. This is exactly what happened. Competitor's products replaced with compliant Parker.**



## Parker SC Italy & Ferrari srl - Compliant N<sub>2</sub> for food market

**Fabio Bruno from Parker Italy explains further –**

*“Euro Company based in the province of Ravenna, Italy, packages nuts and dried fruit at their 65,000 m<sup>3</sup> production plant on 32 packing lines.*

*Their main customers are the major supermarkets and key to maintaining their reputation for providing top quality products, is modified atmosphere packaging. Not only do the supermarkets demand maximum shelf life and product appearance but the MAP process must be in full compliance with European regulations and backed up by proof. This also includes the compressed air supply that operates the packing machines being to “food contact” standard.*

*Parker’s Key Account Manager, Massimo Telloli, worked with authorised distributor, Ferrari Srl, to provide Euro Company with a supremely energy efficient system that met their demands and those of the supermarkets.*

*The package comprised of a Parker MX-LE107 vacuum regeneration desiccant dryer, OIL-X filtration and stainless-steel sterile gas filtration to produce food grade compressed air suitable for food contact.*

*The nitrogen demand was provided by two N2-60P NITROSource gas generators, sharing the compressed air source from the MX-LE107 centralised factory-based system.*

*Euro Company had existing nitrogen generators on site from Claind and Isolcell with dryers and filters from Atlas Copco.*

*We won the business, completely replacing these products, because Parker Italy and Ferrari Srl, were able to answer all of Euro Company’s and the supermarket inspector’s questions and concerns, accurately and completely, demonstrating application leadership and professionalism.*



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Essential in securing the order was the ability to provide Euro Company with proof by the appropriate documentation that all the equipment proposed would fully comply with European regulations for food grade nitrogen and compressed air along with materials of construction as outlined in FDA Article 21.

Parker NITROSource and MIDIGAS products have 3rd party validation to demonstrate full compliance such as food grade nitrogen for use as an additive, E941, to commission regulation EU231/2012.

Parker is also a major contributor to the British Compressed Air Society, (BCAS), and British Retail Consortium, (BRC), with regards to expertise and specification leadership resulting in the publication of recommended standards such as BCAS "Best Practice Guide 102 – Food & Beverage Compressed Air"

This gave Euro Company's QA department the confidence to give the go-ahead to purchase the system from Ferrari, knowing any scrutiny, from a food audit for example, would stand up to any test of compliance and could be backed up with full documentation."

One of Euro Company's key values is "respect for people and the planet".

The installation of the MX-LE107 compressed air desiccant dryer and N2-60P nitrogen generators, certainly enables Euro Company to reduce their carbon footprint. Using one of the most energy efficient dryers on the planet and negating the need for truck-based nitrogen deliveries, goes a long way to help play a part in realising this key value.



2 x N2-55P nitrogen generators and an MXS102c desiccant dryer pre-treatment package provide food grade nitrogen at 0.5% purity to Taylor Farms for MAP.



## Freshness guaranteed for craft salad producer

Rob Lear, Parker BDM based in the USA explains about a win for salad packaging.

"Taylor Farms is a US producer of fresh cut salads and fruit operating 13 facilities throughout North America and Mexico. Very important to them and their customers is to be logistically placed to provide the highest quality, fresh produce daily across the entire region. Modified atmosphere packaging enables maximum shelf life and minimum wastage without preservatives but does incur additional cost.

Taylor Farms Tennessee facility was using expensive nitrogen from a gas company bulk vessel until Parker's distributor, John Bouchard and Sons, got involved.

Gas flow and consumption from liquid vessels can be difficult to ascertain, because often there is no indication of how much gas is being used via flow meters. Fortunately, Taylor Farms were able to provide John Bouchard and Sons with comprehensive invoice and delivery details for the liquid supply dating back over a 12-month period. After careful analysis of the liquid delivery data and a full site survey to gain a complete understanding of Taylor's Farms specifications and operational needs, a dual bank NITROSource N2-55P system was proposed to fulfil the demand of the MAP lines.

Instrumental in helping Taylor Farms with their decision to purchase a Parker system through John Bouchard and Sons was the fact that at their Texas production facility they had been running Parker nitrogen generators for over 10 years with exceptional reliability and stability."

A shelf life of 14 days for cut and prepared salad is exceptionally good. The change-over from very high purity gas evaporated from liquid, to Parker generated gas has achieved the same result but at much lower cost and environmental impact per bag produced.

It's important to consider that the purity of the flushing gas is of less importance than the maximum remaining oxygen content in the pack. A small amount of oxygen in packaged vegetables and salad is often desirable to keep the produce "alive" while slowing the respiration to prevent deterioration.

FRESH FROM  
Taylor Farms  
Foodservice

Custom Blends

Item	Blend	Schelf Life	Pack Size	TI/HI
Baby Kale	100% Kale	14 Days	2/1.5#	10/16
CA Blend	50% Iceberg, 30% Romaine, 10% Endive, 10% Radicchio	14 Days	4/5#	10/8
Cascade Blend	60% Romaine, 30% Green Leaf, 10% Radicchio	14 Days	6/2#	10/8
Chopped Kale	100 Kale	14 Days	4/1#	10/8
Hearts & Hearts	50% Spring Mix with Radicchio, 25% Green Leaf Hearts, 25% Romaine Hearts	14 Days	4/2#	12/8

Different salad mixes and an indication of shelf life from Taylor Farms.

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## MIDIGAS mighty performance!

MIDIGAS is often over shadowed by NITROSource big brother, however for food applications it's a powerful resource in providing a cost-effective solution in lower flow applications.



Within Europe, the food manufacturing industry is made up of over 60% small and medium enterprise, (SME's), companies with 15 employees or less. These companies are more likely to use individual cylinders, manifolded cylinder packs or mini-tanks for their nitrogen gas requirement, rather than big bulk vessels.

These traditional methods of supply offer a fantastic opportunity for huge, end user cost savings when replaced by MIDIGAS.

Here are a couple of excellent food applications using Parker MIDIGAS, shared by Chris Lyles, Sales Director, from one of our key distributors for nitrogen gas generators in the UK – Maziak Ltd.



## A 96% reduction in nitrogen gas costs is very “Appealing”!

Fruitapeel (Juice) Ltd is an industry leading manufacturer of quality juices, smoothies and fruit sauces to the retail and food service sector, now part of the Puratos group of companies.

The company uses food grade nitrogen, E941, on their orange juice aseptic filling machine line. Replacing ambient air with nitrogen, in the packaging, protects the mineral and vitamin contents of the product from oxidation.

As a low flow, small volume user, Fruitapeel were consuming one manifolded cylinder pack (MCP) per week. With a very expensive average cost of around £500 each (€575 Euro / \$650USD), this equated to £3.40 per m<sup>3</sup> of gas used, (€3.91 Euro / \$4.42 USD).

Prompted by a proactive Maziak email campaign, Fruitapeel's interest was piqued by the benefits of nitrogen generation to replace their expensive MCPs, at its Llantrisant production site in South Wales.

### Chris explains -

*“The new system, proposed and subsequently installed by Maziak, uses existing factory compressed air to generate nitrogen through a MIDIGAS2 nitrogen generator. It offers significant cost savings as well as the flexibility to adapt to changes in production demand, quality improvement, and the removal of the handling, ordering, health, safety and administrative issues associated with cylinder packs.*

*The system runs 24/7 if required, with a maximum output of 3m<sup>3</sup>/hr @ 0.5% MROC, which is three times the current use. It can generate the equivalent content of 1 of the MCPs it replaced in 48 hours!*

*The total gas cost from the MIDIGAS2 is approximately £0.15p/m<sup>3</sup>, offering a saving in the region of 96% with a pay-back in a little under 12 months”*

### Robert Stillman, Engineering Manager at Fruitapeel states-

*“We are very pleased with the installation Maziak has provided. It has been completely trouble-free. It has freed us up from the hassle of cylinder change overs and has taken the worry away over how much expensive gas is left in the cylinders and sent back to the gas company! We are very happy with the solution supplied.”*



## Generating Food Quality Nitrogen Gas in a Nutshell!

J. O. Sims of Spalding, Lincolnshire.

Founded in 1896 by Josiah Oliver Sims in London's Pudding Lane\*, J.O. Sims is one of the UK's leading suppliers of fresh fruit, fruit ingredients and fruit snacks. Worldwide, they farm over 1,000 acres of cherry, apple, peach, nectarine and apricot orchards and are the UK's largest supplier of cranberries and wild blueberries.



\*A point of interest on British history - Pudding Lane is a small street in London widely known as the location of Thomas Farriner's bakery where the Great Fire of London started in 1666!

Chris Lyles of Maziak explains further –

*"J. O. Sims factory in Spalding, Lincolnshire, was undergoing expansion and improvement when they met with us while we were exhibiting at The PPMA food equipment show in Birmingham.*

*A key site upgrade being considered was to package nut products within a food quality nitrogen modified atmosphere (MAP).*

*They had already considered the traditional high-pressure gas cylinder packs as the way forward but were interested to hear more about Maziak's more flexible and cost-effective solution to make food quality nitrogen on site from a standard compressed air source.*

Following a site meeting and exchange of information it was clear that a Parker food grade nitrogen generation system would offer J.O. Sims Ltd many advantages, including:

- **Significant annual savings over the traditional high-pressure cylinders.**
- **Total control of their own supply.**
- **Food quality nitrogen gas available when required, on demand, 24/7.**
- **Calibrated meter to continuously display nitrogen quality for audit purposes.**
- **No long-term gas supply contracts.**
- **No manual handling of heavy high-pressure cylinders reducing potential health and safety issues.**
- **Re-use of the existing compressed air infrastructure.**
- **Modular installation that can be expanded in the future. "**

**James Crowson, Site Engineer at J. O. Sims is delighted with the solution Maziak specified and installed, stating -**

*"We needed to gas flush to improve the shelf life of our product. This brought several headaches along the way with gas bottle storage, handling and regulations to name a few. At the PPMA show last year we came across Maziak's stand with the Parker nitrogen generation system, the perfect solution to all our headaches in front of our eyes. We now have the generator installed within the production facility using our existing compressed air system and we now run safe and cost-effective MAP for our product. I would highly recommend this to anyone looking into gas flushing."*

Two great examples of how effective MIDIGAS can be in smaller flow applications.

What's more, MIDIGAS is undergoing some special attention by our engineering and R&D colleagues right now. Look out for more exciting news on a new and improved version coming your way soon!



### Available now

As announced in the last edition a new white paper is now available covering the Parker NITROSource PSA range of nitrogen generators to demonstrate their full compliance with European Union food grade gases statute, (covering the majority of regulations in the rest of the World too). This document contains some useful information that clearly defines the specification for the different food gas application descriptions as well as HACCP, (Hazard And Critical Control Point), considerations and areas of Parker differentiation.

[Download it here](#)

## Thanks for reading and to those that contributed articles on their successes, it is very much appreciated.

If you have a success story you would like to share and feature in a future edition of NITROSource News, please send me the basic details and I can develop the story with you.

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