



				He Helium
	O Oxygen	F Fluorine	Ne Neon	
P Phosphorus	S Sulfur	Cl Chlorine	Ar Argon	
As Arsenic	Se Selenium	Br Bromine	Kr Krypton	
Sb Antimony	Te Tellurium	I Iodine	Xe Xenon	



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GSFE Distributor Conference 2020 in Edinburgh



Award winners share the stage with the overall Embark winner, for a trip to New York as first prize – Dalkia Air Solutions, France – Marc Gainette and Sebastien Mesure. Awards presented by Patrice Bourret – VP Sales Companies EMEA S.W. region.

The distributor conference held in Edinburgh this year was a great success and an example of Parker’s commitment to continuous improvement, with content and structure evolving through valuable participant feedback. Neil, Stephen and the team worked tirelessly behind the scenes to ensure previous suggestions were incorporated and the event was staged for maximum attendee benefit. Congratulations and many thanks to everyone who attended for your continued support . **We very much look forward to seeing you at next year’s event!**

At the conference, the CAGT and Gas Generation content focussed on the food and beverage market sector, underlining the importance of sales to this growth area; while the launch of the NITROSource Compact range with improved performance and flow extension over the MIDIGAS range it replaces was also well received.

I was fortunate enough to speak with many attendees and one area of great interest and potential future sales opportunities was the NITROSource Compact for lower flow applications.

I spent some time in discussion with Prodromos Ioannidis from Parker’s longstanding distributor, ITO based in Athens, Greece, he explained to me –

“Olive oil is a very important commodity in Greece and we produce some of the finest in the world. Nearly 60% of cultivated land in Greece is dedicated to olive production. High quality olive oil regions in Greece are the Kalamata area in Messinia County and Laconia County both south of the Peloponnese along with Crete and Mitilini. We have many nitrogen generation systems installed in these places.

In Greece, 80% of olive oil extracted is extra virgin. It is very important during the production, bulk storage and packaging of this delicate and expensive oil, to prevent oxidation that can cause oxidative rancidity, dramatically altering the taste and quality of the product.

In Greece many individual growers of olives, collaborate in a cooperative to share the costs involved in the purchase and operation of olive oil production and packing machinery.

ITO have had great success in providing predominantly MIDIGAS based systems for olive oil production where it is used to blanket the bulk storage and also inject nitrogen into the finished bottle head space.

Trying to do this in some of the remote areas and islands of Greece is almost impossible with traditional methods of supply such as cylinders and mini-tanks. Gas generation is really the only viable option and the unit gas cost is very low too, without wastage, making it a very attractive solution.”

Prodromos is further encouraged by the performance and flow enhancements afforded by the new NITROSource Compact range to raise the stakes in an ever-increasing competitive arena.



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ITO installations for olive oil blanketing and bottling

Customer	Generator	Purity
Argicultural cooperative of Messara, Crete	MIDIGAS 6	0.5%
Argicultural cooperative of Saint Dimitrios, Monemvasia	MIDIGAS 6	0.5%
Argicultural cooperative of Saint Apostol Neapoli, Monemvasia	MIDIGAS 6	0.5%
Argicultural cooperative of Sterna, Messinia	MIDIGAS 6	0.5%
Argicultural cooperative Zakros, Crete	MIDIGAS 2	0.5%
Sparta Gourmet	N2-35P	0.5%
Kassel S.A. Lakonia	MIDIGAS 6	0.5%
Evipridis S.A. Plora Heraklion Crete	MIDIGAS 6	0.5%
Liokarpi Protogerakis Vori, Heraklion, Crete	MIDIGAS 4	0.5%
Argicultural cooperative union of Molaoi Lakonia	N2-25P	0.5%
Argicultural cooperative union of Kinouria Astros Arcadia	N2-20P	0.5%
Argicultural cooperative union of Lakonia	MAXIGAS108	0.5%
Argicultural cooperative union of Peza Crete	MAXIGAS108	0.5%
Nutria SA	MAXIGAS110	0.5%

ITO LTD (Greece) is a Parker Certified Process and Compressed Gas and Separation Distributor, specializing in the food, beverage, pharmaceutical, oil & gas industry and analytical laboratory gas market.

A member of the BUSE Group of Companies, active mainly in the Greek market with export sales and projects in Romania, Albania and Cyprus.

The company's expertise is design, engineering, manufacturing and sales of gas and liquid filtration, purification and separation projects, turnkey gas distribution and management systems, gas filling stations and on-site gas production.



MIDIGAS6 and CDAS installed using Transair by ITO at Saint Dimitrios Cooperative



Prodrimos is a mechanical engineer with expertise in high purity, industrial, food and beverage gas distribution systems, gas separation and filtration projects.

He has been working in partnership with domnick hunter and subsequently Parker since 1997

Thanks for the information shared, Prodrimos, it is very much appreciated.

Olive oil global market

Virgin Olive Oil production by country – metric tonnes 2018/2019

Spain	1,600,000
Italy	265,000
Greece	225,000
Morocco	200,000
Turkey	183,000
Portugal	115,000
Tunisia	120,000
Syria	100,000
Rest of World	3,131,000

Source – International Olive Council

It isn't just olive oil that benefits by being protected through inerting with nitrogen gas. Many other types of edible oils are blanketed, sparged and packed to prevent oxidation and increase shelf life.

Edible oils can be extracted from a wide variety of plant-based sources to produce – Sunflower oil, soybean oil, palm oil, coconut oil, rapeseed oil, sesame seed oil, cotton seed oil, corn oil, safflower oil and canola oil.



Then there are nut based oils typically from almonds, beech nut, macadamia, cashew, peanut, walnut, pecan, hazelnut and pistachio for example.

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Rapeseed crop and sunflower seed oil

Oil Species	2019/2020 global million metric tonnes production est.
Palm oil	74.6
Soybean oil	56.8
Rapeseed oil	27.8
Sunflower seed oil	19.0
Palm Kernel oil	8.6
Peanut oil	6.0
Cottonseed oil	5.2

The main spoilage mechanism for edible oils is oxidative rancidity, occurring when the fatty acids in the oils come into contact with oxygen in atmospheric air. This results in the development of undesirable odours and flavours, destroying the delicate taste and aromas, rendering the oil unusable. The oils that are most at risk are those rich in polyunsaturated fatty acids.

Nitrogen gas is an ideal medium to protect the oils from atmospheric oxygen during processing, bulk storage, sparging to reduce dissolved oxygen, product transfer and bottling.

The good news also is that only nitrogen is required, so the gas company supply can be potentially, entirely replaced.

Although not every country has suitable environmental conditions for growing the raw material - vegetable and nut oil plants, most do have some local production and blending of imported oils and hence nitrogen potential usage for this industry can be considered global.

Tony Brown, UK Gas Generation Sales Manager, explains more about another successful installation in the UK for edible oil production, sold and installed in January 2017 by Parker authorised distributor, Quality Assured Industrial Services Ltd, (QAISL), based in Hertfordshire.

ADM – (Archer Daniels Midland)

ADM is an American multinational organisation formed in Minneapolis in 1902, a global leader in human and animal nutrition, with its roots established in the milling and extraction of linseed oil.

In the UK, ADM have two wholly owned subsidiary edible oil refineries used to process sunflower seed oil, rapeseed oil, linseed oil as well as tropical oils such as palm and coconut.

Based on the outskirts of East London, ADM Pura Foods Ltd, Purfleet, have seven N2-80P NITROSource generators used for general processing and blanketing of the oils, specified to output up to 650m³/h @ 2% purity. The generators are connected by MODBUS to a central control room where they are automatically cascaded on and off line to meet the rapidly varying site demand with maximum efficiency and economy.

The site was originally supplied nitrogen via an Air Products twin tower nitrogen generator with liquid back-up, also used for peak demand.

ADM Pura Foods Ltd, still retain the liquid for peak shaving, but purchasing the seven N2-80P units outright instead of renting, along with the energy saving cascading capability, demonstrated a significant cost saving and desired payback.

Additionally, in the packing hall, two N2-35P NITROSource generators provide 0.5% purity for modified atmosphere packaging in compliance with EC231/2012.



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ADM Erith Ltd.

Just a few miles south of Purfleet, across the Thames River, ADM, Erith Ltd, processes approximately one million tonnes of rapeseed annually, resulting in the production of 385,000 tonnes of refined oil.

Based on the success of the installation in Purfleet, QAISL, were commissioned to investigate nitrogen generation here too. In 2019 an N2-80P @ 0.5% was installed.

Fortunately, good news travels further afield across "The Pond" from the UK to the USA too!

Rob Lear, Business Development Manager, from Parker North America confirms –

Based on feedback from ADM UK, ADM located in Windsor, Ontario, Canada, purchased three NITROSource N2-65P generators at 0.5% purity, in late 2017, configured two on load with the third standby.



NITROSource units at ADM Windsor, Ontario, Canada.

Just like the UK, the aim was to reduce their overall liquid nitrogen usage and costs with the generators used for base load and the liquid for any peak shaving plus back-up."

The plant engineer at Windsor, Edwin Maleche, is so pleased with the performance and reliability of the generators he has supported Rob in extolling the virtues of NITROSource PSA to other North American ADM production facilities.

Rob states – "Having Edwin on a conference call with other ADM plants is really beneficial for both parties. Edwin's colleagues can hear first hand and without bias exactly how the generators perform and how much liquid is being saved, without any additional sales pitch from me!

Edwin is happy to act as a reference for NITROSource because it provides real tangible benefits for ADM that all plants that use nitrogen can benefit from. It's a win for ADM and a win for Parker"

As he has told me in the past – "Rob, your generators are champs!" If that isn't feedback from a delighted customer, I don't know what is?"

So far Rob has sold systems on the back of this to –

ADM Des Moines, Iowa, USA – two N2-80P generators @ 0.5% purity

ADM Mankato, Minnesota, USA – two N2-55P generators @ 1% purity

ADM Enderlin, North Dakota, USA – five N2-80P generators @ 0.5% purity

There are also other projects ongoing...

What edible oil production and processing happens in your local region? Is there potential for gas generation sales?

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.

Send to phil.r.green@parker.com
Cell +44 (0) 7768 317040

Available now
New white paper on food gas mixes for modified atmosphere packaging.

[Download it here](#)



White Paper - Parker nitrogen gas generation for Modified Atmosphere Packaging (MAP).
By Phil Green - Applications Manager Industrial Gas Generation

ENGINEERING YOUR SUCCESS.

Did you know?

EIGA (European Industrial Gases Association), have a document 194/15 concerning the design of on-site nitrogen generators



In this document there are many recommendations that Parker NITROSource and NITROSource Compact fully comply with.

Two that Parker are providing additional support to comply and differentiate on are –

1. Certification that during service training, good food hygiene practices were advised and demonstrated during the handling of tools, components, cleaning equipment and critical calibration when maintaining nitrogen generators and associated products.
2. Labels to be provided to advise that the Parker nitrogen generators produce food grade nitrogen gas and that associated storage vessels contain food grade nitrogen gas.

Parker ENGINEERING YOUR SUCCESS
Parker Hannifin Gas Separation and Filtration Division EMEA
CERTIFICATE OF ACHIEVEMENT
Presented to
ABC Of XYZ
on **xxth xxxx 2020**
Who on this day has successfully completed theory and hands-on training, and has demonstrated the necessary knowledge and skills to be certified to perform Installation, Maintenance & Repair Services encompassing specific food safety and gas specifications to EC 231/2012, materials and components in contact with food grade gases, hygiene and critical instrument calibration.
On Parker PSA Industrial Gas Generation
Midigas / Maxigas & NITROSource Compact / NITROSource PSA
John Close
GSFE Parker Hannifin Corporation.

Parker Food Grade Nitrogen Gas Generator
This Equipment Produces
E941, (EC) 231/2012 - Nitrogen For Food Use

Contains - E941, (EC) 231/2012 - Nitrogen For Food Use

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