

No. 19 Issue 02 | September 2016

**MESSER**   
Gases for Life

# Gases for Life

The industrial gases magazine



The Messer World

## Close-knit – our experts

Gases for Life:  
A perfect  
summer day

Aquaculture and processing:  
Ecological freshness

Award:  
Messer number  
one in Europe

## Dear Readers,

A T-shirt is certainly not considered typical business attire. Yet this special shirt has a lot to do with our business, or rather with the way Messer does business.

Last year, hundreds of staff within the Messer companies met for the first-ever “Employees’ Day”. What they all had in common was that they were wearing T-shirts bearing the key phrase of our employer branding statement: “That’s Messer. That’s our way.”

I was delighted about this clear message and the commitment it showed to our company. It sends an important signal, both within the company and to the outside world.

Our cover story looks at the close, project-based cooperation between the companies of the Messer World, which is a good example of how we do things “our way” across company boundaries.

Do you enjoy being outdoors in the summer? If so, you will, as a matter of course, come across products that have a connection with our “Gases for Life”. This may well be crispy grilled fish. More information on these summer delights is featured in the “Practical Focus” and “Using Gases” sections of this issue.

Here’s wishing you an enjoyable read.

Best wishes,



Stefan Messer





Cover Story

# 10 Close-knit – our experts

**Cover photo:**  
Dr Bernd Hildebrandt of Messer Group and Gudrun Witt of Messer Cutting Systems are just two of the many experts who rely on teamwork.

All the companies that are “Part of the Messer World” contribute products and know-how which help to optimise manufacturing processes, extend the service life of means of production or significantly improve quality. At the same time, they are bound by their roots as family businesses and by the values of the Messer World.



Practical Focus

# 6 A perfect summer day

Without our “Gases for Life”, barbecues just wouldn’t be the same. For they ensure pure flavours, an attractive appearance or reliable functioning – from A for awnings to Z for zesty lemon sorbet.



Using Gases

# 14 Ecological freshness

When farming fish in closed systems, it is crucial to supply the fish with sufficient oxygen. Later on, in the processing stage, nitrogen and carbon dioxide ensure that the fish is as fresh as possible when it arrives on the consumer’s table.

**Good for you and the environment**

**This magazine** not only brings you interesting articles and interviews – it is also kind to the environment. “Gases for Life” is printed on 100% recycled paper.



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# Messer number one in Europe

On 21 June in Berlin, Messer was presented with the "Top Sustainable Family Business of the Year" award for exemplary sustainability and corporate responsibility.

Stefan Messer was joined by his wife Jenjira (left) for the presentation of the award in Berlin.



The award is presented by British business magazine CampdenFB and French bank group Société Générale to European family businesses that can demonstrate high social, economic and environmental standards. Messer uses measurable targets to document developments in areas such as environmental protection,

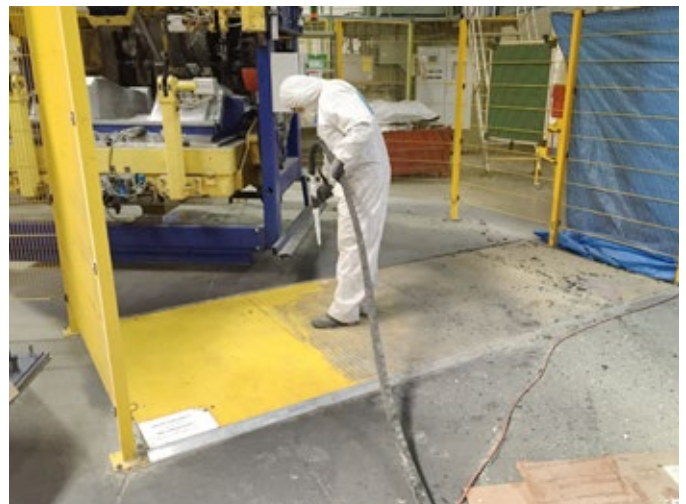
energy consumption, safety and personnel development, and publishes the results in its annual CSR report. In 2015, Messer received a total of 14 awards, including for safety at work, outstanding economic involvement, as best supplier and as employer of the year.

*Angela Bockstegers, Messer Group*

## Pellet specialist

4-les Ve Výškách, a service company based in Bor near Pilsen (Plzeň), cleans surfaces with dry ice on behalf of its customers. It produces the necessary dry ice pellets in-house from liquid carbon dioxide. Among other things, the pellets are used to clean moulds for customers in the automotive and mechanical engineering sectors. 4-les Ve Výškách also supplies pellets for food refrigeration. The company has been getting the CO<sub>2</sub> from Messer and renting a pelletiser from ASCO since April.

*Jiří Svatoš, Messer Technogas*



Hungary: Gases for cast aluminium

## Aluminium for cars

The Poland-based Alumetal Group will soon be putting its fourth production facility into operation in Komárom. The plant is designed to produce 60,000 tonnes of aluminium alloy from 100,000 tonnes of scrap metal a year. Messer will supply the new aluminium refiner in the northern Hungarian town with large quantities of liquid oxygen and liquid nitrogen. The oxygen will

ensure highly efficient combustion in an oxyfuel burner, which is also being supplied by Messer; the nitrogen will be used to purge and purify the aluminium melt. The light metal base material will mainly be produced for the automotive industry, including original equipment manufacturers (OEM), which have major production centres in the region.

*Kriszta Lovas, Messer Hungárogaz*



Photo: © Alumetal Group

Serbia: New logistics concept for small customers

## Capillary distribution

Messer in Serbia has developed a new sales and distribution concept for customers with small gas requirements. A minivan is making on-demand deliveries to cash-paying customers in Belgrade – and a further four Serbian cities in the near future. The delivery service is available for all cylinder gases, coolants, propane/butane, dry ice, electrodes and filler wire. The service is much more flexible because the minivan makes direct deliveries, whereas previously a large HGV used to do its rounds. Customers can place orders 24/7 via a free telephone number or via [www.moj.messer.rs](http://www.moj.messer.rs). For an additional charge, deliveries can also be made at night and at the weekend.

*Ernst Bode, Messer Tehnogaz*

Netherlands: Shielding gas for baby food

## Protecting powdered milk

One of the world's leading baby food manufacturers uses gases from Messer to protect powdered milk against oxidation. The products manufactured at its Dutch production facility include special milk powders for infants who are allergic to cow's milk. A mixture of nitrogen and CO<sub>2</sub> displaces air in the production and packaging process and helps maintain the powder's high quality. The manufacturer, who gets the gases from Messer, is currently in the process of creating additional production capacity at the plant in order to meet demand, which has increased worldwide, particularly in China.

*Marina De Ridder, Messer BV*



Messer engineer Stephan Corvey's son also enjoys his morning milk – mixed from milk powder.



# A perfect summer day

Without gases, the barbecue on a perfect summer day wouldn't be half as nice: anything delicious, aesthetic or practical almost always owes some of its pleasant properties to one or several gases. Gases for Life are ubiquitous here too.

## Summery culinary delights

As soon as the first rays of sunshine break through the clouds and the temperatures gradually rise, it begins – the barbecue season. In summer, many people like to spend their evenings in the company of family or friends, enjoying delicious food and chilled drinks. Opinions are divided on whether a gas or charcoal barbecue is better. Some people don't want to do without the aroma of charcoal. Others value the rapid and even heating provided by gas barbecues thanks to propane.

Nitrogen and CO<sub>2</sub> protect food to be grilled against oxidation, keep it cool during transportation and perform other useful tasks, thereby preserving the flavour, freshness and consistency of the food and ensuring full enjoyment. For example, thanks to inert gas packaging, meat remains appetising right up to the point when the barbecue chef wields his tongs. The effectiveness of the spices is due, not least, to cryogenic nitrogen: it helps preserve the flavours of spices during grinding.





Dry ice keeps sausages and fish cool on the way from the producer to the supermarket. It also ensures the optimal dough temperature for kneading and forming baguettes. Cryogenic nitrogen helps ice lollies get their thin, crispy chocolate coating. This is because the gas ensures that the hot melted chocolate sets as soon as it comes into contact with the ice cream.

**Refreshing beverages**

Beer has a refreshing taste and forms a nice head because CO<sub>2</sub> is added to it in the brewery. Wine growers fill the headspace of their vats with an inert gas such as CO<sub>2</sub>, nitrogen or argon to prevent the wine from oxidising and ensure that it retains its fruity aroma. Bottles of juice have a drop of liquid nitrogen added to them during the bottling process. The drop vaporises straight away and expands, ensuring that the PET bottle remains dimensionally stable and the juice does not go off. Tap water, too, would not be how we know it without gases: among other things, CO<sub>2</sub> provides the necessary level of hardening while oxygen and ozone get rid of undesirable constituents so that fresh and clear water flows from our taps.

**And everything that goes with it**

In order to prevent us from cutting our lips when drinking from glasses, the edges of the finished glasses are melted slightly to make them even and smooth. Since the process of smoothing the edges has to be carried out very quickly, the special burners used for this are supplied with pure oxygen (O<sub>2</sub>). O<sub>2</sub> also makes the firing of ceramics much more efficient and environmentally friendly. Without gases, knife blades would not be as lastingly sharp and attractive as we know them. The cold treatment of metals with cryogenic nitrogen ensures that they remain sturdy and retain their shape in the long term. The soldering of handles and blades involves the use of acetylene and pure oxygen. Messer's ternary mixtures – for example of argon, oxygen and CO<sub>2</sub> – ensure perfect welds on the steel parts of bicycles, barbecues, awnings and sunshades.

*Editorial Team*

Xia Xinggang (4<sup>th</sup> from left), Key Account Manager at Messer in China, and his family enjoy the "Gases for Life" products on summer evenings.



China: Nitrogen for extruders

# Bicycle giant boosts efficiency



Employees of Zhangjiang Messer value the quality of Giant bicycles.



**B**icycle manufacturer Giant is, as the name suggests, one of the largest in its sector worldwide.

In the eastern Chinese city of Kunshan, the Taiwanese group manufactures aluminium parts for its bicycles by means of extrusion. This involves heating aluminium blocks and pressing them through dies, giving the extruded light metal the desired profile.

A nitrogen cooling system was installed in Kunshan for the first time last year. After consulting existing Messer customers in Germany, Giant opted for the Incal process. Messer installed the cooling system and supplied the necessary liquid nitrogen. The process ensures efficient and precise cooling of the extrusion die. Thanks to the use of nitrogen, it also creates an inert atmosphere that prevents oxidation of both the heated aluminium and the die. As well as allowing the efficiency of the extruder to be increased by ten per cent, the process has also led to a significant improvement in the surface quality of the frame tubes. The company now wants to equip other extruders with the Incal process.

*Jasmine Yang, Messer China*



## 6 questions for

Florin Constantin

Florin Constantin has been working in the IT department of Messer in Romania since May 2010. He has been IT manager since June 2011, with responsibility for the maintenance and development of the IT infrastructure. He is also the proud father of a little son. He lives with his family in Bucharest.

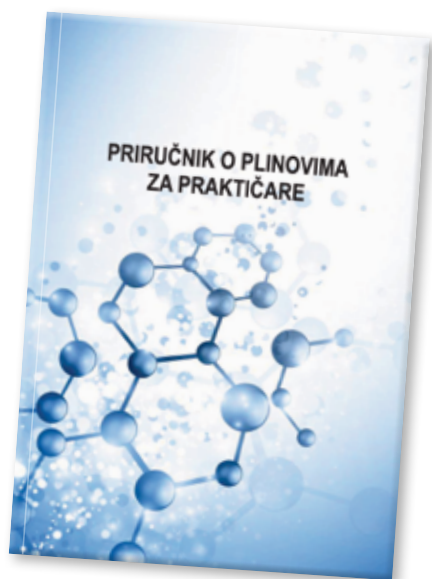


1. A working day is perfect ...  
if it starts with no open tickets ... only kidding! Seriously, a perfect day is when I can develop new things and don't have to grapple with old unfinished business.
2. What I absolutely need for my job is ...  
what I've already got: the full support of the management and understanding from my colleagues.
3. A novel/film which I can recommend without hesitation is ...  
Dune by Frank Herbert
4. I can get irritated by ...  
"users" who do not admit to having made a mistake on the computer or put the blame for their mistake on somebody else. (Perhaps this can be generalised beyond just "users".)
5. I can get excited about ...  
implementing new projects with new technologies.
6. My wish for the future ...  
is to stay healthy so that I can enjoy the time I have with my family. In terms of my work, I want our IT infrastructure to be able to deliver results in future that are at least as good as they are now.

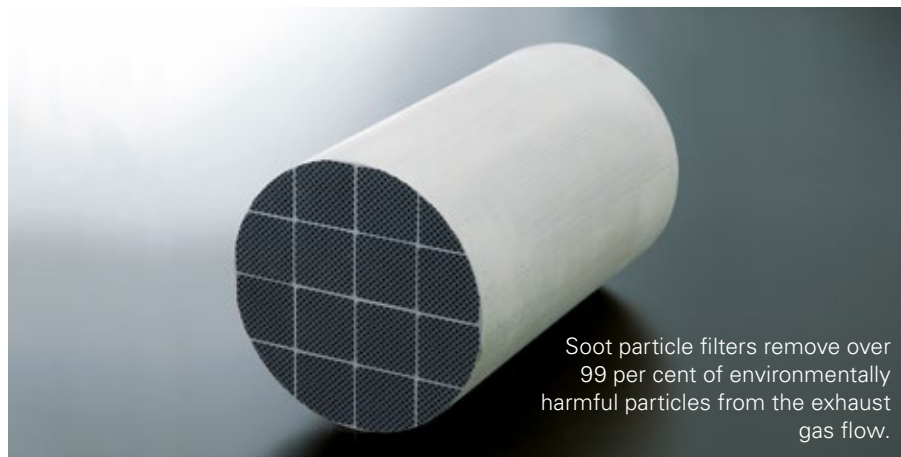
## Gas expertise

Last April, in the town of Gračanica, a gas applications handbook was published for practically oriented lessons at secondary schools. The work is the result of a project in which three Bosnian schools, Messer and German international development organisation GIZ (Gesellschaft für Internationale Zusammenarbeit) were involved. It is targeted at students as well as businesspeople who deal with gases, and presents the gases and their applications using a wide range of examples from different fields. The country's educational institutions are distributing the handbook to other schools in order to spread knowledge of the uses of gases.

*Maja Softic, Messer BH Gas*



The handbook provides information on different gas applications as well ideas for practical course units on the subject of gases.



Soot particle filters remove over 99 per cent of environmentally harmful particles from the exhaust gas flow.

## Ceramics clean exhaust gases


The Japanese Ibiden Group operates a production centre for soot particle filters in the Hungarian town of Dunavarsány. The filters are made of porous ceramics. They remove over 99 per cent of environmentally harmful particles from the exhaust gas flow of diesel vehicles. The manufacturing process involves inerting the kilns with nitrogen and argon. Ibiden has so far

been getting the nitrogen from two pressure swing adsorption units, which Messer installed on the factory premises, as well as through additional liquid gas deliveries for peaks in demand. A further nitrogen generator is to be added next year in order to cover the plant's increasing consumption. Ibiden Hungary also gets the liquid argon that it needs for production from Messer.

*Kriszta Lovas, Messer Hungárogaz*



# Close-knit – our experts



Messer is regarded as the inventor of oxyfuel technology and a pioneer in electric welding. Consequently, Messer Cutting Systems, a specialist in welding and cutting technologies and equipment, has developed from a small engineering firm into a global, innovative product and consulting company. Just like its "gases sister", it is bound by its roots as a German family business and the values of the Messer World.





The divisions of the Messer Eutectic Castolin Group's sister companies, i.e. Messer Cutting Systems, Castolin Eutectic, BIT, Spectron Gas Control Systems and Messer Medical Home Care are "Part of the Messer World" just as much as Messer - Gases for Life and ASCO Carbon Dioxide. They all offer application-specific know-how and products that help to optimise manufacturing processes, extend the service life of means of production or significantly improve quality.

Twelve years ago, the Messer Group once again became an owner-managed industrial gases company. At the beginning of 2005, Stefan Messer eventually also acquired financial investor Carlyle's stake in the Messer Eutectic Castolin Group, thus restoring to family ownership what his grandfather Adolf Messer had founded more than a century earlier and what his father Hans Messer had expanded after the Second World War – a company with an international setup operating in the industrial gases and welding & cutting sectors.

Messer - Gases for Life and Messer Cutting Systems are linked by the Messer logo. But that's not all: in many countries the sales branches work together in order to supply customers with all the products and technologies they require from a single source. Bosnian customer Saračević d.o.o., a company specialising in ferrous and non-ferrous metallurgy, is one of them. In an interview with Gases for Life, the industrial gases magazine, their managing director shared his thoughts on what he values about working with Messer (see page 12 - 13).

Messer Cutting Systems is a global supplier of products and services to the metalworking industry. The main focus of innovation is the digitalisation of processes and products. Messer Cutting Systems is represented worldwide and has more than 900 employees as well as five production centres.

*Continued on page 12*



Continued from page 11

In terms of diversity, the spectrum of products is similar to that of gases. The Messer Cutting Systems product range encompasses oxyfuel, plasma and laser cutting systems, including hand-guided machines and special machines for shipbuilding, as well as machinery and equipment for oxyacetylene welding, cutting, brazing and heating. The portfolio is rounded off by spare parts, repairs, modernisation, maintenance and service as well as environmental technology for the systems. The company's software solutions optimise production and business processes. The product spectrum is complemented by solutions provided by technology partners, for example in the automation segment.

In August 2015, in the Chinese city of Kunshan, Messer Cutting Systems completed construction work on another laser technology plant and commenced manufacture of laser cutting systems in the new production areas. An independent sales and service office was also opened in Turkey. Production capacities in India were expanded back in 2013.



From 25 to 29 October 2016, Messer Group and Messer Cutting Systems will be exhibiting jointly under the Messer logo at Euroblech, the international sheet metal working technology exhibition in Hanover.

Messer – Gases for Life and Messer Cutting Systems regularly team up with other partners to exhibit jointly at international or European welding and cutting trade fairs. Messer thus brings together what belongs together.

*Editorial Team*

## Interview with

**Osman Saračević** (centre),  
Managing Director of  
Saračević d.o.o., Tešanj

**“Messer provides us  
with optimal  
technical support”**

*Good customer relations are part of the capital value of any company that supplies its product to the end customer. Since entering the market in Bosnia and Herzegovina a good 20 years ago, Messer has maintained good relations and ongoing cooperation with its customers – with mutually beneficial results. Osman Saračević, Managing Director of Saračević d.o.o. in Tešanj, spoke to us about joint activities and investments aimed at improving production.*

Mr Saračević, thank you for taking the time to talk to us. You have recently invested heavily in your company. Where are you today?

**Osman Saračević:** We have indeed been very active in the past. Last year we started building the new storage and production area and successfully completed the project at the beginning of this year. We have also improved our infrastructure: throughout our company, we have renewed and improved the paving, the hydrant network and the wastewater treatment system. We have also invested in new technologies to increase our productivity, as well as in the creation of additional capacity to facilitate delivery of our products in accordance with our customers' wishes. In total, we have invested more than a million convertible marks. In this way, we have generated





new capacities and opportunities for the development of our new products.

Has your investment in technological advances also resulted in increased production and, therefore, increased sales?

**Osman Saračević:** The fact is that last year our sales increased by 41.2 per cent compared with 2014. In the first quarter of this year, they increased by more than 50 per cent compared with the same period last year. This shows us that all our measures and investments to date have been necessary and justified. Our internal organisation, good internal cooperation and continuous professional development of our employees at different levels have also been improved.

Further training is considered obligatory at our company.

What are the most common problems and challenges in your work?

**Osman Saračević:** Boosting production and sales is followed by developing service, technology, personnel, premises etc. in the company. Still, the greatest problem is that our planning is of a short-term rather than long-term nature because our customers seldom make long-term plans themselves.

How many employees do you have, and what are your plans for the future?

**Osman Saračević:** Our business is stable and developing steadily, we have a two-shift operation and presently employ a staff of 32. If the current pace continues, we will introduce three-shift operation in future! At the moment, we are mainly working on the production of semi-finished products as well as on the continuation of the manufacture of new products, which we have jointly showcased with Swedish-based SSAB at the construction trade fair in Zagreb. We are an authorised and certified manufacturer of Hardox parts.

You are a long-standing customer of ours. Could you tell us more about the origins, nature and quality of your cooperation with Messer?

**Osman Saračević:** Here I would like to stress the importance of the introduction

of new technologies, which gives us a major advantage over our competitors. Messer supplies us with oxygen, argon, propane, butane and acetylene. We also have a great working relationship with Messer Cutting Systems, whose Statosec KSP automatic flame cutting machine we have installed. Messer is therefore simultaneously our supplier for liquid and other gases, spare parts, good service and excellent technical support. We consider our cooperation with Messer to be of a very high standard, and it can be further improved through new technologies and joint projects. So far we have had no cause for complaint with regard to our cooperation with Messer. Most of all, we value a responsible approach, meticulousness, effectiveness and quality. We won't talk about the quality – that's a given.

What is your company's main objective?

**Osman Saračević:** Our main aim is to have satisfied customers, and with Messer – Gases for Life and Messer Cutting Systems as reliable suppliers, with expertise and good gases, and above all with good service, any obstacle can be overcome.

*Maja Softić,  
Messer BH Gas*



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#### Saračević d.o.o., Tešanj

The company was founded in 2002, employs 32 staff and continuously strives to ensure that its capabilities and resources are optimally geared to the needs and requirements of its customers.

Since 2007 Saračević d.o.o. has focused on the wholesale supply of

products and semi-finished products in the ferrous and non-ferrous metallurgy segments.

A detailed analysis of customer needs led to the decision to optimise the supply processes. This involved Saračević d.o.o. investing in, among other things, state-of-the-art logistics.



# Ecological freshness



Fish live in water, so you don't necessarily associate them with gases. But they too breathe oxygen. When farming fish in closed systems, it is therefore necessary to supply a sufficient quantity of this gas. In subsequent fish processing, the priority is to preserve the perishable product quickly and without loss of quality. Cryogenic nitrogen and carbon dioxide play an important role here.

Since around 1970, aquaculture has been the fastest growing branch of the global food industry. About half of the fish supply is now farmed artificially rather than caught in the wild. However, there is also growing criticism of this industry, which is taking up increasingly large parts of coastlines, river banks and mangrove forests. Fish farming in closed systems offers an ecologically acceptable alternative. The fish live in artificial ponds, with the water being purified and recycled in a closed loop. There is no impact on natural waters.

## Oxygen enrichment

For such installations, it is not enough to inject air into the water. To achieve the required oxygen content, the gas is needed in its pure form. The fish farmers at Fish Farm Bohemia in the Czech village of Rokytno have been getting it in liquid form from Messer since 2012. A second installation in Kořenov was added last year. At both locations, the oxygen is taken from a storage tank and passed through an evaporator unit before being fed into the water in gaseous form. At Fish Farm

Bohemia, it supports the farming of trout, pikeperch, sturgeon and catfish. Recently, ServFood, a subsidiary of PTC Germany, also put a fish processing plant into operation in the Serbian town of Smederevo. Its centrepiece is a twelve-metre-long tunnel freezer, which Messer rents out to the company. It uses cryogenic nitrogen to rapidly freeze the processed fish. Messer has further modified the freezer, among other things by equipping it with an additional spray bar. This further speeds up the cooling process while at the





same time allowing lower temperatures to be achieved. The result is improved freezer efficiency, which is a precondition for putting ServFood's big plans into effect. Fish processing is due to begin with 10,000 tonnes a year, followed by an increase to 30,000 tonnes at a later stage. Space has also been planned for a second freezer in the future. What matters in the freezing process is the rate of cooling. A slow rate leads to the formation of large ice crystals, which damage the cells in the frozen

product. Vitamins, nutrients and flavour are lost, and the fish loses its fresh texture. Cryogenic nitrogen or CO<sub>2</sub> ensure very rapid freezing, with the ice crystals remaining small in size and therefore harmless. In addition, the fish retains its good quality after thawing. Both consumers and fish stocks benefit from this: if all types of fish can be offered for sale throughout the year, the incentive to ignore close seasons disappears.

*Vít Tuček, Messer Technogas, and Bojana Blagojević, Messer Tehnogas*



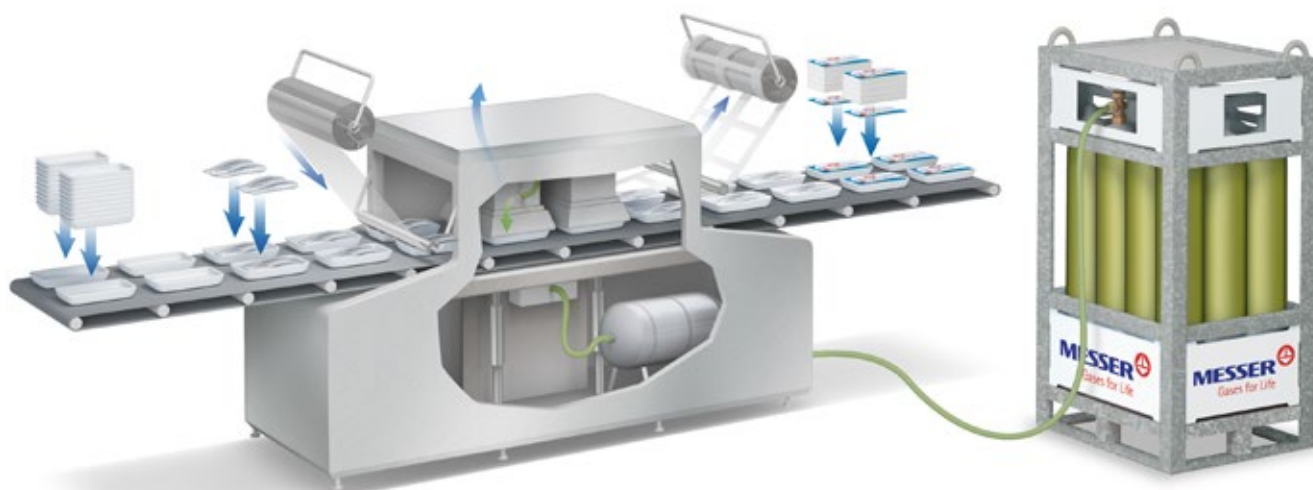
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# Helping Hands

Messer in France offers buyers of medical gases a tailor-made service. This includes highly flexible logistics that enable customers to be supplied at short intervals, a training programme on the handling of gases and cylinders, and e-invoicing.

The training of medical staff begins with the provision of educational material and several days of training at the clinic. Regular repeat units are held to refresh the employees' knowledge and introduce new staff to the subject matter. This provision helped win a contract with MEDIFLUIDES Lorraine, a regional purchasing group comprising 40 public hospitals. Franck Perrin is the purchasing coordinator for this group as well as for one of its members, the university hospital (CHRU) in Nancy.

### What is a purchasing group?

**Franck Perrin:** It's when several health care establishments join forces in order to obtain favourable terms from suppliers. For example, we jointly buy medical gases, for which I am responsible. As with the other contracts, the gases contract was put out to public tender complete with specifications. It is then up to the suppliers to find the optimal solution for installations and logistics and to offer a good price. The purchasing group evaluates the offers it receives according to a point system.

### What are the main criteria here?

**Franck Perrin:** The price makes up about 50 per cent of the total points. The other half is allocated for the service that is provided in connection with the product. We want clear, comprehensible invoicing, a reliable supply without any interruptions, and correspondingly reliable logistics. Other aspects include maintenance and technical support, optimised equipment, ease of use of cylinders, and training provision for the medical

teams that will be working with the gases. I attach particular importance to this. Sustainability and energy efficiency are also values that are important to us.

### Why did Messer win the contract?

**Franck Perrin:** Messer was awarded the contract on account of its service, its technical support, its sustainability as well as its price for the complete package. This gave the company the highest score. In other words, Messer offered the best overall package that fulfils the requirements stipulated by the members of the purchasing group.

*Caroline Blauvac, Messer France*

Franck Perrin, Purchasing Coordinator of  
MEDIFLUIDES Lorraine



# Quiet nights, clean air

Supermarkets often get their deliveries early in the morning. This involves refrigerated vehicles causing noise and exhaust fumes through their compressors if their freight is cooled with conventional refrigerating machines. This can be very disruptive to residents in the area. The situation is particularly problematic if the shops are located in town centres. Cooling with the EcoLIN concept offers a solution: cryogenic nitrogen allows the sensitive goods to be preserved completely silently. And CO<sub>2</sub> emissions are also reduced.

Refrigerated vehicles that regulate the temperature in their load space with the EcoLIN concept make diesel-powered compressors superfluous. They use liquid nitrogen to cool their freight. The liquid gas is conducted from a special insulated tank to a heat exchanger in the load space, where it vaporises and thus cools the air in the refrigerated box.

The refrigerating system boasts advantages not only when it comes to noise pollution, but also in terms of its environmental impact: production of the liquid nitrogen leaves a much smaller carbon footprint than the burning of fossil fuels to power conventional refrigerating machines. This means that

CO<sub>2</sub> emissions can be reduced by an average of 20 tonnes per year per HGV. What is more, the system is low-maintenance and does not require the use of toxic coolants.

EcoLIN refrigeration facilitates the transportation of fresh products at temperatures between zero and four degrees Celsius as well as frozen products at minus 18 degrees. It reacts more quickly than conventional refrigeration: the rise in temperature when the doors are opened is offset immediately thanks to the cold stored in the tank. This allows strong temperature fluctuations in the load space to be avoided.

*Dr. Michał Wróbel, Messer Polska*

Process diagram for EcoLIN refrigeration







Spain: Gases for research laboratory

## Control and innovation

In 2015, the AINIA research institute in Paterna carried out some 208,000 tests on behalf of 700 companies in the industrial and agricultural sectors. It deals with, among other things, the enhancement of food safety, the development of new additives, compounds and packaging materials, as well as the use of waste products for energy generation. The AINIA laboratories use gases such as argon, synthetic air, nitrogen, CO<sub>2</sub>, hydrogen and special gas mixtures, the latter primarily in chromatography. Various analytical methods are used, for example, to detect heavy metals in foodstuffs or pharmaceutical residues in animal products. The institute gets the gases from Messer.

*Marion Riedel, Messer Ibérica*

Germany: New packaging for cylinder gases

## MegaPack compact

The MegaPack cylinder gas bundle has set new standards in terms of safety, efficiency, ergonomics, sustainability and design. Three years after its launch, the MegaPack family has now been expanded with the addition of the compact C4 and C6 models with four and six cylinders respectively. While offering the same capacity of 600 and 900 litres, the new MegaPacks have overall dimensions of 0.92 x 0.93 x 1.95 and 0.92 x 1.33 x 1.95 metres (width x length x height) respectively, making them considerably shorter than their predecessors. Once again, the successful Duplex version will also be available with the new MegaPacks.

*Alexander Kriese, Messer GasPack*



Romania: Welding gases for metal construction

## Yacht, net and wave



Three new pedestrian bridges offer holidaymakers in the Romanian Black Sea resort of Mamaia additional barrier-free connecting paths – plus they are also quite eye-catching. The design of each bridge is based on a maritime theme and the bridge named accordingly: Yacht, Crest of a Wave, Seagull & Fishing Net. The footpath on the cantilever span of the “Yacht” bridge is also planked in tropical wood, which is reminiscent of a ship’s deck. The constructions were fabricated by Polaris, a metal construction company. Acetylene, Argon 4.8, Ferroline C18 and CO<sub>2</sub> from Messer were used for the welding work.

*Carmen Baragan, Messer Romania Gaz*



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The "Gases for Life" editorial team

We are ...



From left to right: Dr Joachim Münzel, Angela Bockstegers, Zsolt Pekker, Kriszta Lovas, Marlen Schäfer, Annette Lippe, Dr Bernd Hildebrandt, Reiner Knittel and Peter Laux (not pictured: Benjamin Auweiler, Diana Buss, Dr Christoph Erdmann, Katrin Hohneck, Michael Holy, Dr Dirk Kampffmeyer, Marion Riedel and Roberto Talluto)

Competition

The winner of this issue’s competition will receive a gourmet hamper with specialities that are perfect for the summer. For your chance to win this delicious prize, please answer our three questions about this issue of "Gases for Life". The letters in the numbered boxes will reveal the answer. Please send the answer by e-mail with the subject line "Gases for Life competition" to [angela.bockstegers@messergroup.com](mailto:angela.bockstegers@messergroup.com). The deadline is 21 October 2016. Please remember to include your name and address. The competition is not open to employees of the Messer Group and their families. In the event of multiple correct answers, the draw determines the winner. The result of the draw is final and not subject to appeal.

What is the name of the fish farm in the Czech village of Rokytno that uses Messer gases?  
            3

One of the aims of Messer gases and know-how is to increase ...  
  7

What is the name of the British business magazine that presented Messer with a sustainability prize?  
 6  2      8    4

Answer:  
          
 1 2 3 4 5 6 7 8

Congratulations! The winner of the last competition is Marion Wallinger from Hirttenberg, Austria. The correct answer was "Swimmingpool".



## Indispensable in labs and operating theatres

Medicine and science need nitrogen: among other things, the gas is used to cool superconducting magnets, biological samples and stem cells. As a cryogenic gas, nitrogen is used to lower the body temperature of a patient undergoing heart surgery or an organ transplant. As an extra-dry protective gas, the vaporised nitrogen facilitates controlled chemical reactions and solid-state physical experiments. Nitrogen is used in medical applications, laser research and various types of spectroscopy, as well as to exclude paramagnetic oxygen from magnetic resonance processes. The list could be extended almost indefinitely.

The list above is from the University of Szeged, one of the most renowned universities in Hungary – and beyond. Alongside many other research awards, the university also boasts, for example, a Nobel prize for one of its scientists, the physiologist Albert Szent-Györgyi. Messer recently started supplying this academic institution with all the liquid and gaseous nitrogen it requires. The gas is used mainly at the university hospital and in the natural science faculties' numerous laboratories. Messer also supplies all the other gases that are needed for scientific research and patient care.

*Kriszta Lovas, Messer Hungarogáz*