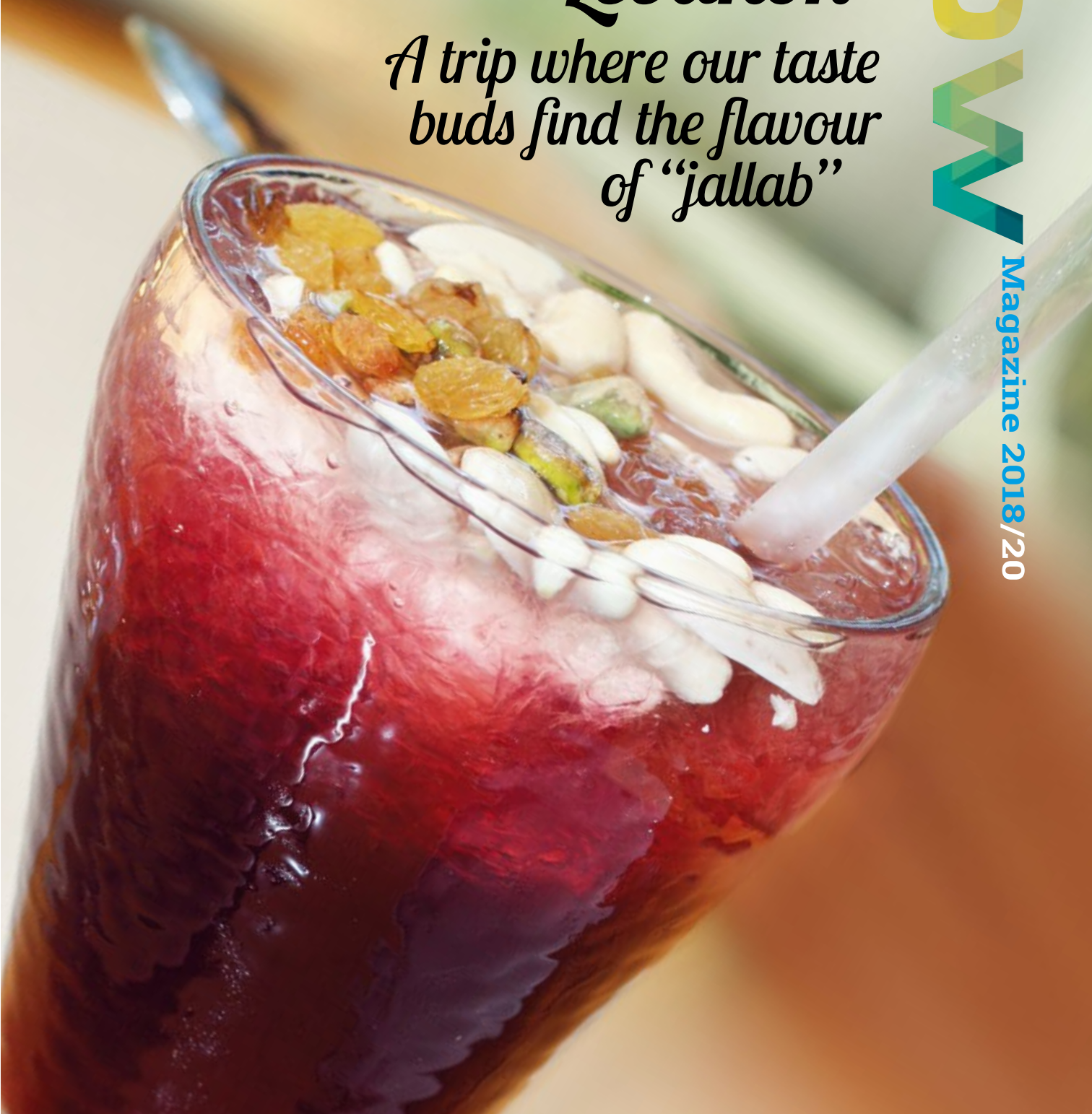


Lebanon:
A trip where our taste buds find the flavour of "jallab"



IN THIS ISSUE



16.



30



46.



66.



78.



62.

- 04 Lebanon: Kassatly Chitaura
- 16 Mexico: Bebidas Refrescantes de Nogales
- 30 Algeria: Tousnina Sari
- 46 Italy: Palabrahaus - Florem S.n.c.
- 62 Energy savings with the new "green" SFP 30 packer
- 66 "Pallet display": the ideal trays for Large Retail Organisation
- 69 Shrink tunnels fuelled by methane gas
- 70 Microblock for Microbreweries
- 78 SMI is the number 1 in Italy in the "Innovation" category of the E. B. A.
- 80 Smicentroamericana S.A. de C.V.

EDITORIAL 2018/20

Sustainable development
with Industry 4.0



Often, when we speak about Industry 4.0, we run the risk of forgetting the potential offered by environmental sustainability. SMI has always been highly active in realizing products and solutions dedicated to the "Smart Factory", even before the innovative concepts of Industry 4.0 and IoT (Internet of Things) became a turning point in the design of plant and machinery for bottling and packaging. With the launch of our ERGON platform, we began the "new age of smart manufacturing" that summarizes the strengths of a production model that is slimmer, interconnected and responsible. The choices that we make today can increase quality of life and have a positive effect on the ecosystem in which we all

live and work. For this reason, all new SMI products are characterized by a strong emphasis on energy saving and respect for the environment, as well as being able to converse intelligently with operators, control and supervision systems, other production machinery and so on. Among the most recent innovations to leave our research and development laboratories, are the new ultra-compact EBS-K blow-moulder, and the new range of spiral-wrappers which use a stretch-film with no need for a shrink-tunnel. These developments demonstrate how it is possible to efficiently combine the production needs of our customers with economically advantageous and energetically virtuous solutions.

Paolo Nava, President & CEO, SMI S.p.A.

sminow | magazine

Created by:

SMI S.p.A. - Marketing Dept.
Via Ceresa, 10
IT-24015 San Giovanni Bianco (BG)
Tel.: +39 0345 40111
Fax: +39 0345 40209
www.smigroup.it



Available in: Italian, English, Spanish, French and Arabic - 11,000 paper copies

Access our www.smigroup.it web site and fill in the request form available in the news / sminow magazine section to have a paper copy mailed to you.

Contributors to this issue:

Kassatly Chtaura - Tousnina - Palabrahaus
Bebidas Refrescantes de Nogales

Product pictures in this issue are shown for reference only.



This product is print on paper from responsible sources

KASSATLY CHTAURA

- ➔ **SOFT DRINKS SECTOR**
KASSATLY CHTAURA SAL
Nahr El Mott, Beirut, Lebanon
kassatlychtaura.com
- ➔ Integrated System ECOBLOC® ERGON 2-9-3 K EV



GEO LOCATION

A TRIP THROUGH HISTORY WITHIN THE UNIQUE NATURAL BEAUTY OF THE CEDARS OF GOD – UNESCO WORLD HERITAGE SITE AND SYMBOL OF THE NATION- AND, ABOVE ALL, A TRIP THROUGH THE SENSES WHERE FOOD AND DRINK PLAY AN IMPORTANT ROLE. WE ARE IN LEBANON, A SPLENDID LIVELY COUNTRY, WHERE LOVERS OF MIDDLE EAST CUISINE FIND AN EXQUISITE VARIETY OF FOODS AND BECOME SEDUCED BY THE FLAVOURS OF THIS MYSTERIOUS LAND, THAT HAS ABSORBED THE BEST INGREDIENTS OF THE TURKISH AND ARAB CUISINE, WITH THE ADDED TOUCH OF FRENCH REFINEMENT. THE RESULT OF THIS MIX CAN BE TASTED IN EXQUISITE DISHES, OFTEN PREPARED WITH LAMB, WITH DRIED FRUIT (ALMONDS, PISTACHIOS AND HAZELNUTS), OR WITH VEGETABLES AND FISH. ALL OF WHICH ARE DRESSED WITH LEMON JUICE AND ACCOMPANIED BY REFRESHING DRINKS.

A TRIP WHERE OUR TASTE BUDS FIND THE FLAVOUR OF “JALLAB”

Jallab juice is one of the most well-known drinks in Lebanon, made from carob, fruit syrup, dates, grape molasses and rose water. When we speak about jallab, we immediately think about Kassatly Chtaura. In 1977 Kassatly was

the first company to bottle this syrup in modern production plants, over the years the machinery has been upgraded and modernized. The most recent investment, which was necessary to face the high market demand for this beverage, allowed the Lebanese company to completely



automate the bottling process thanks to an integrated system from the ECOBLOC® ERGON 2-9-3 K EV range, provided by SMI, which, in a single machine, combines the stretch-blow moulding, filling and capping functions of 1 litre and 2.65 litre bottles in PET at a maximum speed of 3.200 bottles/hour.

➔ **THE SWEET AROMA OF JALLAB**

Originally from the Middle East, Turkey and Iran, Jallab is a syrup made from carobs, dates, grape molasses and rose water, which are then smoked by incense. It is served diluted with water, ice, zibibbo wine and pine nuts, without which it would not be an authentic jallab drink. This delicious, refreshing beverage, which can even be ordered to accompany a meal, has a unique, sweet aroma, and is usually served in summer.



A BANQUET FROM THE ARABIAN NIGHTS

Lebanese cuisine charms the eye and the palate. Intense colours, intoxicating odours, contrasts of consistency and flavours, all combined with a tasty use of spices. Despite these distinctive features, it is very difficult to summarize the characteristics of Lebanese cuisine. It is an astonishing cuisine, more known than others from the Middle East but one that deserves to be discovered, because not only is it full of dishes with mysterious and fascinating names, but it summarises ancient culture and traditions. It is said that the Lebanese cuisine is a culinary art for the eye, at first it satisfies the vision and then the palate. It is

impossible to remain emotionless in front of the abundance on the tables, the centre of attention is the “mezzé”, small appetizers that are always served in multiples of six. The banquet is the most important form of expression in Lebanese cuisine, it is the excuse for a party and festivity, highly appreciated by the sultans who imported the tradition from the Turkish cuisine. It is to the sultans and their vanity that we owe the presence of lots of dishes among the “mezzé” that have a creamy consistence, like “baba ganoush” or “hummus”. In fact, the sultans did not want to ruin their smile by chewing, therefore, they preferred dishes which were easy to chew!



AMONG TRADITION AND SOPHISTICATION

Lebanese cuisine is one of the richest and most sophisticated in all the Middle East. It was influenced in particular by the Arab tradition, and interpreted by a touch of French, as can be seen by the presence of many lamb specialities and the wide use of dried fruit and spices. Typical Lebanese condiments give the final touch, such as garlic, olive oil, lemons and aromatic herbs like mint, these are used to give a touch of freshness to many dishes, from meat to salads and even sandwiches. The "mezzé" appetizers, that are served before the main course, are a true ritual of Lebanese cuisine. One of the most typical

is "fattoush", a "poor dish" that was originally conceived to use up any leftover ingredients, it is similar to an Italian panzanella with lots of vegetables and fried Arabic bread, all of this is then flavoured with lemon, pomegranate molasses and sumac, these three ingredients can be found in many other Lebanese dishes, and give fattoush a strong, but pleasing and balanced sourness. Among the most well-known dishes there is also "hummus b-tahini" (purée of chickpeas and sesame seed dough), "baba ghannouj" (purée of roast aubergines), "falafel" ("meat balls" made from dried broad beans) and chicken wings marinated in oil, lemon and lots of garlic. The soups are light, enriched by lentils and spiced with cinnamon, vegetables such as courgettes, marrow or aubergines stuffed with vegetables, or meat and rice or meat and pine nuts are very common. Almost everywhere you can find "kabees" (pickles) on the table, but also salads and lots of seasonal fruit. Among the most common beverages we can find Arabic coffee, "jallab" (base ingredient sultanas served with pine nuts), "ayran" (main ingredient yogurt), "arak" (traditional liqueur) and wine.



KASSATLY CHTAURA

The roots of this Lebanese company go back to 1974, when the current CEO Akram Kassatly founded a small artisan company to produce wine, following in his father, Nicholas's, footsteps who had worked in this sector since 1919. Today, after more than 40 years, the name Kassatly Chtaura is synonymous with quality and enjoyed by consumers in every part of the Middle East. The current range of production is vast and includes, liqueurs, alcoholic and non-alcoholic beers (sold under the brands Buzz and Freez), the branded

Beirut Beer, launched on the market in 2015 and packed by an SMI model SK 400 F shrink wrapper, and of course all the syrups, like jallab. This Lebanese company has been in constant growth right from the beginning, enough so, to have allowed them to reach important goals on the national and international markets over a relatively short time. Kassatly Chataura, who has collaborated with SMI since 1997, currently has more than 10 SMI packers from the WP, SK and MP ranges. These are used to secondary pack a wide range of wrap-around boxes, shrink-wrapped bundles

and card multi-packs. The company pays a lot of attention to market needs and constantly invests in the purchase of latest generation machinery to automate bottling and packaging, such as the integrated system of the ECOBLOC® ERGON 2-9-3 K EV range, which was recently installed for the seasonal production of jallab syrup.

BELOW FROM LEFT: PIERRE ANID, GENERAL MANAGER OF NOVADIM FOOD TECNOLOGY, NAYEF KASSATLY, MANAGING PARTNER OF KASSATLY CHTAURA AND MAURICE RASSI, TECHNICAL MANAGER OF KASSATLY CHTAURA.



THE STAFF OF NOVADIM FOOD TECHNOLOGY

LEFT HAND-SIDE: PIERRE ANID, GENERAL MANAGER, CHARBEL YOUNES, AREA SALES MANAGER, WASSIM MANSOUR, AREA SALES MANAGER AND RENÉE FARES, SERVICE AND SALES COORDINATOR.

BELOW FROM RIGHT: JESSICA YOUNES, SPARE PARTS COORDINATOR AND RAWAD SALIBA, ENGINEERING AND LAYOUT.

Novadim food technology

Professionalism and experience gained during their 25 years in business supplying industrial equipment to the “food & beverage” industry, is without doubt the key to the success of the Novadim Food Technology company, who for many years have represented the SMI Group in Lebanon and who provide fast and efficient support to their numerous customers in the area. Novadim Food Technology has a team of 9 people involved sales, service and technical assistance on over 200 SMI machines installed in Lebanon, Syria, Kuwait, Bahrein, Qatar, the United Arab Emirates, Oman, Yemen, Ethiopia, Sudan, Uganda and part of Eastern Africa. With regards to the recent project at Kassatly Chtaura, Pierre Anid, General Manager of Novadim Food Technology, said “We are proud to have contributed to the installation of the innovative ECOBLOC® ERGON K at Kassatly Chtaura, because this new compact system guarantees a more competitive economy for the company, and has allowed our customer to automate his production so that he can satisfy his customer’s needs more efficiently”. The team at Novadim, with headquarters in Beirut, have understood how to gain the trust of the main bottling companies who operate in Lebanon, like Salassato Chtaura, Société Moderne Libanaise pour le Commerce (PepsiCo), National Beverage Company (Coca-Cola) and many other customers, even abroad, that request quick interventions when necessary, and appropriate sales and aftersales technical assistance.





THE CONSUMPTION OF “JALLAB” DURING RAMADAN

Jallab is consumed more frequently during Ramadan, because during the daytime not only are Muslims not allowed to eat, they can't even drink, they fast in commemoration of the first revelation of the Koran to Mohammed, at the end of the day they interrupt the fasting with dates and jallab syrup. The word Ramadan (sometimes called “Ramazan”, “Ramadhan” or “Ramathan”) derives from the Arabic “rami a” or “al-rama”, which means 'burning heat' or 'dryness'. Ramadan begins with “l'hilal”, which in Arabic means “new moon”, in the ninth month of each year and lasts 29 or 30 days according to the waxing moon, as the Islamic calendar has 354 or 355 days (10 or 11 days fewer than the solar year according to the Gregorian calendar), each year the month of Ramadan falls at a different time of the solar calendar, and therefore gradually moves backwards, until it changes season, occasionally falling in summer when the days are longer and hotter and fasting becoming harder. Therefore, drinking jallab syrup at the end of a day of fasting becomes an elixir to replenish energy and re-hydrate. This tradition causes the sales of the beverage to increase during this important religious Muslim period, to be able to face this challenge Kassatly Chtaura decided to automate the jallob bottling process (it used to be carried out manually), so that they could easily modify the production according to market demand.

DATES: THE EXTRAORDINARY PROPERTIES OF THIS ANCIENT FRUIT

Dates are one of the main ingredients of jallab syrup, they grow in heavy bunches hanging below the leaves of the date palm (*Phoenix Dactylifera*). A date is made up of a fleshy exterior which surrounds a hard stone with a seed inside, it is rich in sugar and this often crystallises on the outside layer. The "*Phoenix Dactylifera*" grows above all in the Canary Islands, in North and South Africa, in the Middle East, in the extreme South of Europe and in Asia. Date palms are very precious trees for some populations who use every part, for example, in homeopathic fields. From the bark off the branches it is possible to extract the mother dye which is very

useful to calm menstrual pains, the trunks can be used in construction and some types of palms are used as decorations. Dates are an important ingredient for jallab, the popular syrup from the Middle East which also contains grape molasses and rose water. They are also used as a sweetener when put fresh into black tea, when they are dried they are used for flour, which mixed together with barley flour is used to prepare the famous date bread. Fresh dates are very easy to digest and contain a lot of simple sugars like fructose and dextrose, for this reason they are considered to be a re-vitalising fruit. This fruit contains antioxidant flavonoids and polyphenols like tannin, noted for their anti-infection, anti-inflammatory

and anti-haemorrhage properties, it is rich in vitamin A, essential for our skin and in beta-carotene, as well as being an excellent source of iron and potassium and also minerals like calcium, manganese, copper and magnesium.

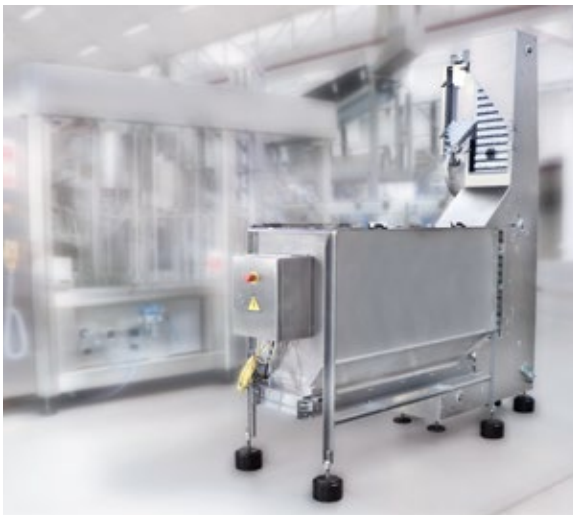


➤ CURIOSITIES ABOUT DATES

The name date comes from the Greek "daktilos" (finger), as its shape resembles a phalanx. The first written words about dates were found in Persian, Berber, Arab and Egyptian. Among the ancient Egyptians and Assyrians, it had a mystical significance, in the Egyptian culture the date palm was the symbol of fertility, while the Greeks decorated their trophies with drawings that represented this plant. The Romans used dates to flavour wine and they considered them to be the symbol of victory and honour, because the palm, even when heavy with fruit, does not bend it tries desperately to lift itself upwards towards the sky. In the Christian tradition palm leaves are the symbol of peace and remind us of when Jesus entered Jerusalem. It is said that Emperor Augustus accumulated lots of these fruits and that the first palm that grew in Rome was born from a seed thrown from the Emperor's dining hall.

SMI SOLUTIONS FOR KASSATLY CHTAURA

For many years the Lebanese company had bottled their jallab syrup by hand, buying empty PET bottles on the open market from a third party, so for their automation Kassatly Chtaura chose the experience of SMI, with who it had collaborated for over 20 years, to provide the ultra-compact ECOBLOC® ERGON 2-9-3 K EV system, comprising a rotary stretch-blow moulder from the EBS K ERGON series, an EV filler and a capper. The new compact integrated system from the ECOBLOC® ERGON K EV range was integrated in the existing line to automate the blowing, filling and capping operations in new PET bottles. While the rest of the operations, such as labelling, are still carried out manually, the production process does not require secondary or tertiary packaging, as the bottles are sold loose. The drawing of the PET bottle, which is blown and filled by the ECOBLOC® ERGON K EV is the same as that used in the past for hand production. The SMI designers were asked to create a lighter bottle than its predecessor and this objective was reached by optimizing the preform material and working on the mechanical characteristics of the new container. Thanks to the improved distribution of the material, the veining of the bottle and to the presence of some geographical factors, it was possible to create a lighter bottle with economical and eco-friendly advantages.





➤ INTEGRATED ECOBLOC® ERGON 2-9-3 K EV SYSTEM

Functions: stretch-blow moulding, filling and capping of 1 litre and 2.65 litre bottles in PET, with a production capacity up to 3,200 bottles/hour (1 L).

Main advantages:

- the ECOBLOC® ERGON K series is the fruit of an innovative project which uses advanced technological solutions inspired by the principles of Industry 4.0 and Internet of Things (IoT)
- rotary, high efficiency stretch- blow moulding equipped with motorised stretch rods (usually used for high speed production), that present considerable advantages compared to linear blowers
- ultra-compact plant, that groups the stretch-blow moulding, filling and capping of PET bottles in a single block and does not need a rinser or airveyors between the blower and filler
- quick and precise filling and capping process, thanks to the electronic control systems and the use of high efficiency valves controlled by flowmeters
- reduced blower energy consumption, thanks to the preform heater module, equipped with high energy efficiency IR lamps and to the blow moulding module equipped with a dual air recovery system that allows the reduction of energy costs tied to the production of high pressure compressed air
- new design with a modular structure, no welding, equipped with protection doors made from reinforced glass, very resistant and time lasting
- economical solutions that allow the flow management of seasonal or bespoke production



➤ EASY-CAP CAP GRABBER

Functions: gravitational cap grabber, that collects the caps from a hopper and carries them the correct way up to the bottling line.

Main advantages:

- very compact structure, made from AISI 304 steel, suitable for any layout solution
- linear and fluid operation, that will only carry caps that are the correct way up, those that are upside down gravitationally fall back into the hopper
- a system that is suitable for lots of different plastic caps
- “user-friendly” operator interface, that allows the operator to use the machine easily and efficiently.

BEBIDAS REFRESCANTES DE NOGALES



WE HEAR MORE AND MORE ABOUT SUSTAINABLE GROWTH, INTENDED AS AN ESSENTIAL CONDITION TO GENERATE RICHES FOR THE COMMUNITY, TO RESPECT AND TAKE CARE OF THE RESOURCES USED AND TO ENCOURAGE A CORRECT AND BALANCED STYLE OF CONSUMPTION. IN THE FIELD OF INDUSTRIAL BEVERAGES, SUSTAINABILITY PLAYS AN IMPORTANT PART AND INVOLVES ABOVE ALL THE PACKAGING, WHERE A LOT OF FACTORS ARE INVOLVED, AMONG WHICH, THE RAW MATERIALS USED, AND ENERGY CONSUMED TO PRODUCE A SPECIFIC PACKAGING. FOR THIS REASON, TECHNOLOGICAL INNOVATION PLAYS A CRUCIAL ROLE IN HELPING THE BOTTLING COMPANIES CHOOSE "PACKAGING" SOLUTIONS THAT HELP TO REDUCE WASTE, OPTIMIZE RESOURCES, ENSURE GROWTH AND RESPECT THE ENVIRONMENT, AS CAN BE SEEN THROUGH THE EXPERIENCE OF THE MEXICAN COMPANY BEBIDAS REFRESCANTES DE NOGALES S.A.P.I. DE C.V.

➤ **BEVERAGES SECTOR**

BEBIDAS REFRESCANTES DE NOGALES
Industria Mexicana de Coca-Cola Group
Ave. Tripoli, Nogales, Mexico

- CSK 40 F ERGON packer
- Conveyors



GEO LOCATION

THE SUSTAINABLE CHOICES OF COCA-COLA NOGALES



Un paso más hacia la botella del futuro.

Hecha hasta con 30% de material de origen vegetal. 100% reciclable.



Sustainability is not a new topic for The Coca-Cola Company and for all the companies in its group, among these Bebidas Refrescantes de Nogales (BRN) an important bottling company in Mexico and part of the Mexican Coca-Cola industry. It is intensely active towards constant sustainable growth and environmental respect, as can be seen through recent investments to modernise

the production and bottling line of the famous drink in PET bottles. A new SMI packer from the CSK 40 F ERGON series, complete with a methane gas shrink tunnel was installed within this line. Global commitment to innovation is the main motor for sustainable growth and for this reason it is fundamental to continually invest in innovative installations and systems designed to allow the world of industry to successfully follow its development plans, respecting the territory where it operates.





BELOW FROM LEFT: EMANUEL CARRANZA, PRODUCTION MANAGER OF BEBIDAS REFRESCANTES DE NOGALES; SERGIO PEREZ, SALES MANAGER OF SMICENTROAMERICANA AND RAFAEL OBREGON, FINANCIAL CONTROLLER OF BEBIDAS REFRESCANTES DE NOGALES.



ABOVE FROM LEFT: MANUEL CASTRO, PLANT GENERAL MANAGER OF BEBIDAS REFRESCANTES DE NOGALES AND SERGIO PEREZ, SALES MANAGER OF SMICENTROAMERICANA.



2+ MILLONES DE ÁRBOLES PLANTADOS Y VAMOS POR MÁS

Contribuimos a **devolver el agua** utilizado en la elaboración de nuestras bebidas y procesos.

- Estamos **recuperando 25 mil hectáreas** de ecosistemas prioritarios que abarcan a las principales ciudades del país.
- Antes que termine este año habremos plantado 20 millones de árboles para proteger las fuentes de agua.
- Nuestro meta, plantar en total **30 millones de árboles**.

Porque sabemos que las actitudes positivas se regresan.

Y que para que haya un futuro, tiene que haber un presente.

INNOVATION AND SUSTAINABILITY: THE MOTORS OF COLLABORATION

Coca-Cola's model of sustainability is based on healthy and active life styles, on the importance of a balanced diet, on product and packaging innovations, and on environmental protection. Coca-Cola believes that the innovations that will have the greatest impact over the next decades, will come from the application of various forms of sustainability, for this reason the company is working to incorporate sustainable

innovations both globally and locally in every aspect of its activity, from its ingredients, to the expansion of varieties of beverages, from the rendering of used water to avoid waste, to the recycling of the packaging. The area and range of the global challenges of today require a model of cooperation based on what the American multinational defines as the "golden triangle", that is the meeting point between institutions, private businesses and civil companies.

> **BRN'S COMMITMENT TOWARDS A HEALTHY LIFESTYLE AND THE ENVIRONMENT**

Bebidas Refrescantes de Nogales (BRN), like all the other companies that are part of the Coca-Cola group, understands the importance of promoting the culture of a healthy lifestyle with many different initiatives that encourage physical activity and personal care. The success of these is possible, thanks to the constant commitment of all the company "stakeholders", together with the government's efforts and the local communities to develop programs that contribute to a healthy lifestyle. The Mexican company invests continually in innovations for its portfolio of products, to offer a greater variety of beverages with fewer calories and suitable for the tastes and thirsts of its consumers. BRN promotes sport activities in schools involving a high number of people, and favours cultural development through events and exhibitions. Among the activities carried out each year there is a day dedicated to cleaning creeks and the surrounding areas, and creating and maintaining green areas etc.



The Coca-Cola Company

The biggest beverage producer in the world which for over 132 years has refreshed its consumers with over 500 carbonated and non-carbonated drinks. Apart from the world-famous Coca-Cola drink, the

company is proud of having a portfolio of many other branded drinks like Coca-Cola Light, Fanta, Sprite, Coca-Cola Zero, Vitaminwater, Powerade, Minute Maid, Simply, Georgia and Del Valle. Globally, The Coca-Cola Company is the market leader with its range of carbonated drinks,



ready-made coffee and juices. Thanks to one of the largest distribution systems in the world, consumers from more than 200 countries choose beverages from The Coca-Cola Company, with around 2 billion beverages consumed every day in every corner of the planet. With continual commitment to create a sustainable system, the American multi-national concentrates on initiatives that protect the environment, promote healthy, active lifestyles, create a safe work environment for its employees, and improve economic development in the community where it operates. Together with its bottling partners, it is among the top 10 companies in the world and has more than 700,000 employees.

COCA-COLA HAS BEEN PRESENT IN MEXICO FOR MORE THAN 90 YEARS, THE PRODUCTION AND DISTRIBUTION OF ITS BEVERAGES IS CARRIED OUT BY A NETWORK OF COMPANIES COMPRISING COCA-COLA MEXICO, EIGHT GROUPS OF

BOTTLING COMPANIES (ONE OF WHICH BIODIFESA RINFRESCARE DE ALESSANO), JUGOSLAVO DEL VALLE AND SANTA CLARA. THESE MEXICAN COMPANIES ARE TOTALLY INDEPENDENT BUT OPERATE WITHIN THE UNIQUE SYSTEM OF THE SAME CRITERIA AND THE SAME POLICIES THAT DISTINGUISH COCA-COLA AROUND THE WORLD.





#WELCOME TO MEXICO

THE BEBIDAS REFRESCANTES DE NOGALES (BRN) PLANT IS SITUATED A FEW KILOMETERS FROM THE BORDER BETWEEN MEXICO AND THE UNITED STATES OF AMERICA. THE HISTORY OF THE CITY OF NOGALES IS PART OF THE LONG HISTORY OF THE 2,000 MILES OF BORDER THAT DIVIDES THE TWO COUNTRIES.

Nogales Sonora, which is in Mexico, and Nogales Arizona, in the United States, are in fact two cities divided by a wall which is now part of the imaginary border. But it wasn't always like this, once upon a time, the roads, that are now interrupted by barbed wire and border check-points, were roads in the same city, the city of Nogales. No other section of wall is as impressive as that of Nogales, which, built in 2011, has the aim of separating the two cities, north and south, which have kept the same name. Thanks to its position on the border, this area is one of the most important points of entry for American tourists. The city-centre, which has around 250,000 inhabitants, is alive with bars, hotels and restaurants that serve varied culinary specialities, and a high number of shops that sell a huge variety of local, handmade objects, which also come from the central and southern parts of the country.

STARTING FROM THE LEFT:
 PAOLO MAGARINI, SALES MANAGER AT SMI; MANUEL CASTRO, PLANT GENERAL MANAGER OF BEBIDAS REFRESCANTES DE NOGALES AND SERGIO PEREZ, SALES MANAGER AT SMICENTROAMERICANA.



THE MARKET FOR CARBONATED DRINKS IN MEXICO

In 2017 the consumption of carbonated drinks in Mexico, grew by 2%, which compared to 2016, showed a decrease. This reduction in consumption is attributable to a series of reasons, including the introduction of a sugar tax on beverages, and the earthquakes which hit the country. Coca-Cola is the proven brand leader in Mexico, and the company's strategy to strengthen its market position pushed it to add further to its portfolio, with low sugar content and low-calorie products. The launch of Coca-Cola Zero Sugar (which has substituted Coca-Cola Zero) has benefited from an intense marketing and promotional campaign, and it is foreseen that in 2018 the consumption of carbonated beverages will rise, even if at a slower pace compared to the past. From a "packaging" point of view during 2017 two main trends have been recorded mainly caused by different consumer habits. In the cities, more single use PET bottles have been consumed, while in the rest of Mexico consumers prefer the more economical multi-pack.

BEBIDAS REFRESCANTES DE NOGALES



Year of foundation: 1957



Group: Industria Mexicana de Coca-Cola



Activity: Bottling and distributing products under Coca-Cola brand



Customers: over 6,000



Distribution centres: Agua Prieta, Cananea and Nacoziari.

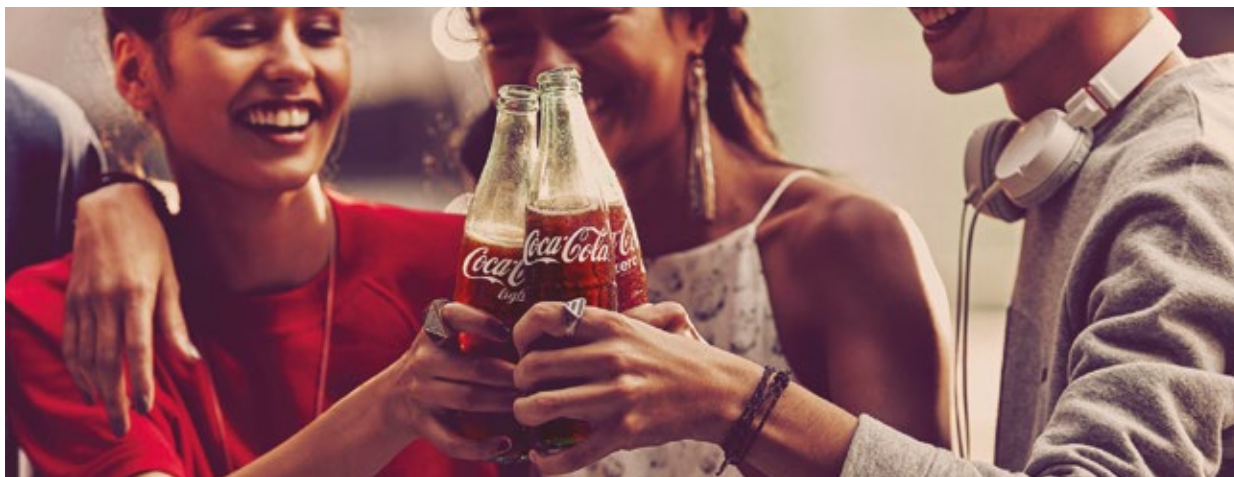


Objective: to offer soft drinks to consumers together with quality services that satisfy their needs, improving the company's output, relationship and collaboration with the community where it operates.



Values: honesty, responsibility, commitment to its services, loyalty, and working as a group.

(Global Data – Mexico soft market Insights - May 2018)



SMI SOLUTIONS FOR BEBIDAS REFRESCANTES DE NOGALES



For the secondary packaging of the PET bottles, produced under the brands Coca-Cola and Ciel, Bebidas Refrescantes de Nogales turned to SMI, purchasing a compact wrapper from the CSK range equipped with a methane gas shrink-tunnel, and a conveyor system to transport the loose and packed bottles. The installation of the new CSK compact packer was the most suitable choice, as these technological cutting-edge packaging machines are distinguished for energy saving, environmental respect, advanced automation and flexibility of use. The CSK ERGON series comprises numerous models, each with a compact and ergonomic design which incorporates the leading technology within the sector, capacity to work up to 50+50 packs/minute (maximum speed is according to the bottle capacity and pack format), in shrink-film only, cardboard pad + film or in tray + film (according to the model).

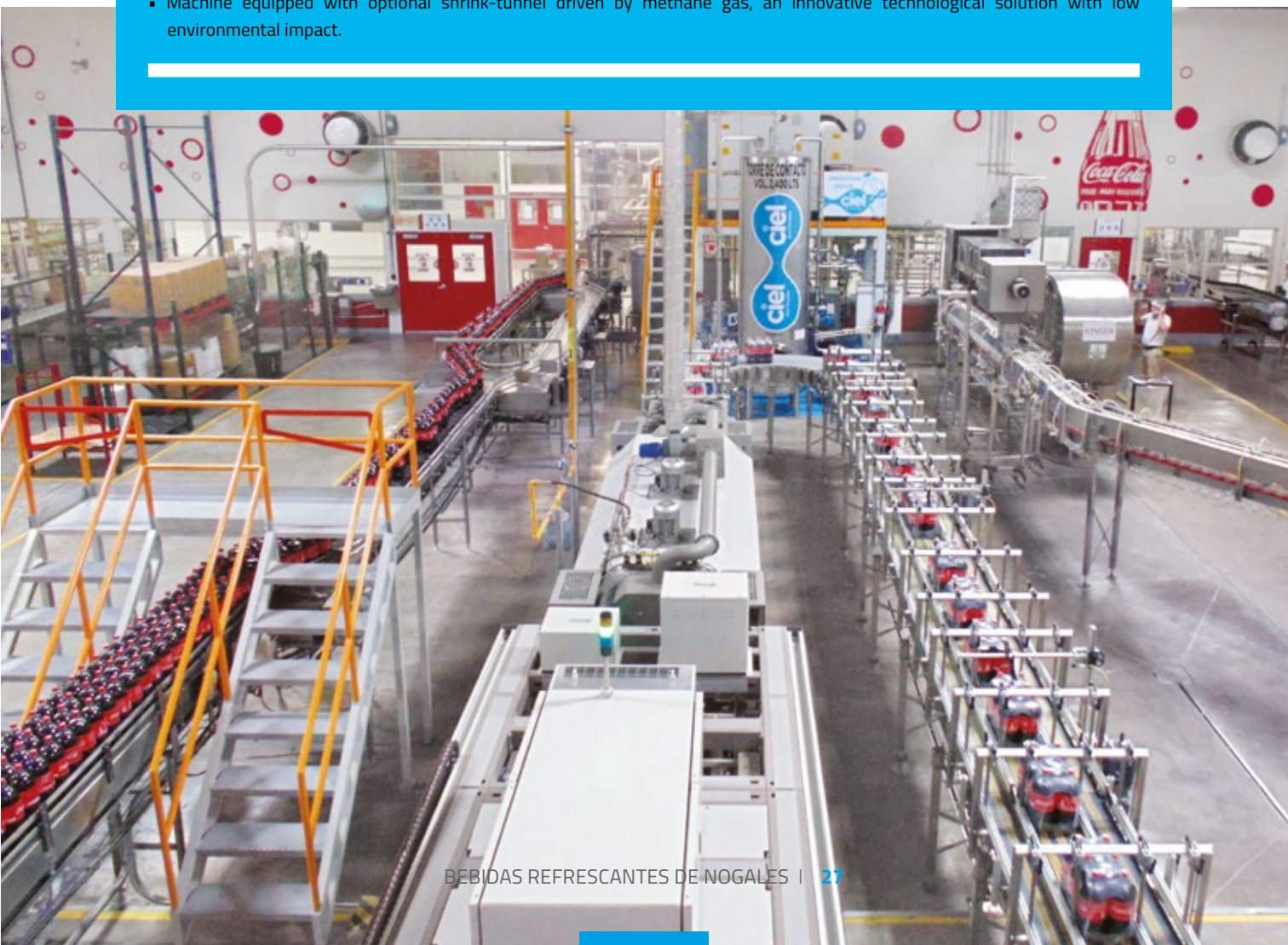
➔ **CSK 40 F PACKER – Production up to 40 packs/minute**

Packed products: PET bottles in 0.6 L / 1 L / 1,5 L / 2 L and 3 L

Packs worked: formats 3x2 twin-lane in film-only and 4x3 and 6x4 single lane film-only for the 0.6L PET bottles. Format 4x3 in film-only for 1L and 1,5L PET bottles. Format 4x2 film- only for the 2L bottle and 3x2 film-only for the 3L bottle

Main advantages:

- Packer equipped with motorized system of oscillating guides situated at the machine infeed to facilitate the channelizing of loose products on the conveyor, equipped with chains made of thermoplastic material featuring low friction co-efficient.
- Continuous motion product grouping device for grouping loose products in the desired format by means of electronically synchronized fingers.
- High efficiency motors attached directly to the drive shaft with the consequent advantage of reducing maintenance, energy waste and noise.
- Machine equipped with an optional device to register printed film with reference mark.
- Compact film cutting unit, with film cutting blade driven by "direct-drive" brushless motorization which makes the cutting more precise and facilitates maintenance.
- New ICOS brushless motors, equipped with integrated digital servo-driver, able to simplify machine cabling and ensure greater energy efficiency, less noise and reduced component wear and tear.
- Machine equipped with optional shrink-tunnel driven by methane gas, an innovative technological solution with low environmental impact.



FRIENDLY SOLUTIONS FOR THE ENVIRONMENT

Energy efficiency is a key factor in every company for the management of available resources, for this reason, the SMI Research & Development laboratories are constantly studying new solutions to optimize energy saving and ensure high levels of efficiency from the systems they produce. Among solutions available within the secondary packaging sector, a shrink tunnel driven by methane is without a doubt an innovative technological proposal, with reduced environmental impact especially in those countries where electricity is produced by fossil combustion. The new tunnel can be combined with all the packers in the LSK, CSK, AFW and SK ranges and with the combined machines in the CM and LCM range. It is a highly technological solution that guarantees remarkable advantages, as it:

- is eco-friendly (low environmental impact)
- guarantees considerable energy saving. From a study on the costs of electricity in Italy carried out in 2016, it is estimated that there is a saving of

60% compared to a standard tunnel with electrical resistances

- ensures a reduction in electricity costs
- has a gas tunnel that reaches the ideal temperature faster than one run on electricity. In addition, the amount of methane that it consumes is minimum, ensuring energy savings, low CO2 emission and immediate operational availability
- is extremely safe, thanks to the latest generation safety systems and sensors
- reduces maintenance, the only parts that need replacing are the electrodes
- is possible to use thinner shrink-film

thanks to a more efficient distribution and control of the tunnel temperature compared to traditional tunnels

Compared to traditional fuels used to produce electrical energy, natural gas has various advantages:

- it guarantees zero pollution, as it burns in a clean way (harmful emissions are practically non-existent)
- it costs less than electricity (in some countries)
- it has a high level of safety
- it is an abundant source of energy



- it is available everywhere and has no supply restrictions (as happens in some countries with electricity)
- it can easily be stored inside the factory. It can be put in special tanks within the plant where it is to be used
- it immediately transforms in heat and guarantees a considerable reduction of CO₂ emissions compared to the production of electricity, that has many phases during its transformation process
- it is a continual source of energy in countries where there are frequent power surges or supply failure.



➤ DID YOU KNOW THAT...

Methane is an ideal solution for the changes in climate that our planet is facing, and it is the only source of energy that can make economic and industrial progress compatible with environmental safeguarding. Methane gas is a fuel that is much cleaner than coal and crude oil (and those that derive from them such as petrol and diesel), this is because its combustion produces between 40 to 45% less carbon dioxide (CO₂) compared to coal, and between 20% and 30% less compared to products deriving from crude oil. Another characteristic of this source of energy, is that it does not radiate solid particles (it does not contain lead or heavy metals) nor ash following combustion. The level of nitric oxide (NO_x) that it gives off is lower than other fuels, while the sulphurs (SO₂) are practically zero. This has been acknowledged by countries with strict laws to protect the environment, where the use of natural gas is spreading in many applications. Gas also has, among all fossil fuels, the highest ratio between energy developed and quantity of carbon dioxide released and therefore contributes very little to the phenomenon of global warming.



TOUSN

➤ **WATER SECTOR**

TOUSNINA SARL
Tousnina, Tiaret, Algeria
www.lejdar.com

- **COMPLETE LINE OF 20,000 BPH**
- integrated ECOBLOC® ERGON 10-40-10 EV system
 - SK 800F ERGON shrink wrapper
 - APS 3090P ERGON automatic palletiser
 - PACKSORTER divider and conveyors
 - Subsupply: high pressure compressor, CIP, inspection systems, coder, labeler, electrical distribution cabinet, wrapper.
- **EBS 4 ERGON**



GEO LOCATION



VIDEO

ALGERIA HAS BEEN HOME TO ROMANS, JEWS, BERBERS, CHRISTIANS, AFRICANS AND ARABS, IT IS A COUNTRY READY TO BE EXPLORED, A REALITY WITH A THOUSAND FACETS, FOR MANY ASPECTS UNSPOILED, IT REPRESENTS A NEVER-ENDING SOURCE OF HISTORICAL TESTIMONY FROM ANCIENT TIMES UNTIL THE PRESENT. IN THIS UNIQUE ENVIRONMENT HISTORY LIVES SIDE BY SIDE WITH MODERN COMPANIES, WHO INVEST IN NEW PRODUCTION PLANTS AND THUS CONTRIBUTE TO INCREASING THE WEALTH OF THE NATION'S ECONOMY, AMONG THESE IS THE TOUSNINA SARL.



INA



“LEJDAR” WATER, SYMBOL OF PURITY AND TECHNOLOGY

Near the village of Tousnina, not far from the city of Tiaret, where you can breathe the air of history, flows the spring water of “Lejdar” bottled by Tousnina Sarl. This company recently put their trust in SMI to supply a new 20,000 bottles/hour line to bottle and pack water under the, Lejdar brand, name of which, derives from the archaeological site of the same name, where you can visit important Berber mausoleums from the Roman era. Lejdar is the brand of spring water produced by the Algerian company Tousnina Sarl, from 2003 until today, the brand has claimed an important share of the mineral water market, “a successful and promising market” as declared by the economic operators of this sector. The rapid expansion of this company, thanks to the increase in sales over the last few years, has forced Tousnina Sarl to invest in new high technology production plants, which allow them to efficiently satisfy market demand and to have the base for further development. The Lejdar water bottling factory, situated in the district of Souguer in northern Algeria, has been







equipped with modern and sophisticated equipment, starting from the laboratories, which satisfy the high level of standards required by international regulations. All of this, together with the presence of expert technicians and a modern, company, managerial vision, represent the strength on which the commercial success of Lejdar water is based. Thanks to the new production line, recently installed by SMI, Tousnina Sarl will be able to further strengthen, their bottling and packaging of mineral water procedures, for their internal market and also for export.



↑ **AT TOP FROM LEFT:** YASSINE MOUHIB, FIELD ENGINEER AT SMI S.P.A.; AEK ABBAS, DIRECTOR OF THE TOUSNINA SARL PLANT, MEHDI DEROUICHE, OWNER OF TOUSNINA SARL; MASSIMO CARMINATI, SERVICE AREA MANAGER AT SMI S.P.A.; MOHAMED DEROUICHE, OWNER OF TOUSNINA SARL AND MOHAMED DJILALI, COMPANY CONSULTANT.

ABOVE: MEHDI DEROUICHE, OWNER OF TOUSNINA SARL.

SMI SOLUTIONS

FOR TOUSNINA SARL



For the bottling and packaging of the natural spring water under the Lejdar brand, Tousnina Sarl turned to the experience of SMI, who supplied a complete turnkey line, supporting the customer during design, construction and installation of the 20,000 bottles/hour plant. Apart from the complete line, the Algerian company also bought an EBS 4 ERGON, to integrate in a pre-existing 8,400 bottles/hour line for the production of 0.33 L, 1 L and 2 L PET bottles for bottling carbonated beverages.



All the machines installed in the new line are part of the ERGON range which uses the most innovative technology in the field of Industry 4.0 and IoT (Internet of Things) solutions. The new installations respond completely to the growth expectations of this Algerian company, which has invested exclusively in latest generation systems, to increase their production capacity and satisfy the demands of the local and foreign markets. Relating to the bottling plant for mineral water under the Lejdar brand, the turnkey solution proposed by SMI provided an integrated system from the ECOBLOC® ERGON range for the stretch-blow moulding, filling and capping of PET bottles together with an automatic wrapper from the SK ERGON range, an APS ERGON palletiser, a divider from the PACKSORTER range and conveyors for loose and packed products. The complete supply takes advantage of the latest generation system of automation and control, which uses the best technology available to manage the “smart factory”. This technology, apart from the above machinery, also comprises a labeller, a rotating arm pallet wrapper, an automatic CIP, a coder, inspection systems, a high-pressure compressor and an electrical distribution system.

➤ INTEGRATED SYSTEM ECOBLOC® ERGON 10-40-10 EV

Functions: stretch-blow moulding, filling and capping of 0.33 / 0.5 L / 1.5L bottles in PET with still water at a production of up to 20,000 bottles/hour.

Main advantages:

- the machine groups together in one single block, the stretch-blow moulding, filling and capping operations of bottles in PET and therefore does not need a rinser or airveyors between the blower and filler
- compact and flexible solution to create bottles with flat cap
- precise and rapid filling and capping processes, thanks to the electronic management control system and the use of high efficiency valves managed by flowmeters
- reduced blower energy consumption, thanks to the preform heating module which has high energetic efficiency IR bulbs, and to the stretch-blow moulding module equipped with the dual air recovery system, Air Master, this helps to significantly reduce energy costs tied to the production of high pressure compressed air
- new design with modular structure, no welding, equipped with ergonomic protection doors made from very resistant and long-lasting tempered glass.

➤ SHRINK WRAPPER SK 800 F ERGON

Packed products: 0.33L / 0.5L and 1.5L bottles in PET.

Packs worked: the 0.33L and 0.5L bottles are packed in 4x3 film only, the 1.5L bottles are packed in 3x2 film only.

Main advantages:

- automatic machine suitable for packing varied containers in different pack configurations in film only
- quick and simple format change over, which allows the change of production in little time according to present and future company requirements
- compact and ergonomic structure, that facilitates the manual maintenance and repair interventions on the internal part of the machine
- the motors are connected directly to the drive shafts, with the advantage of reducing maintenance, energy waste and noise
- shrink-wrapper equipped with the optional innovative “automatic film splicing device with heated blade” system, this joins the edge of the reel which is about to finish with the beginning of the new reel while the machine is running, with no need to stop production. Compared to traditional hot sealing methods, this new device dramatically reduces energy costs and maintenance as it is not necessary to keep the sealing rollers at a high temperature and it also allows more sealing precision when joining the rolls of printed or clear film with a reference mark (with +/- 10 mm from the reference mark). The “film welding device with heated blade” can also handle “non-fusion” film without any problems.

➤ AUTOMATIC HANDLE APPLICATOR HA 80

Packed products: the automatic handle applicator HA 80 attaches a handle to the 3x2 and 4x3 packs arriving from the SK 800F.

Advantages:

- monoblock structure in painted steel
- steel safety guards and sliding doors equipped with see through panels in lexan
- rubber-coated infeed conveyor with chains made from thermo-plastic material providing a high co-efficient of friction
- cardboard labels provided with pneumatic withdraw and electronic control of the handle pitch
- motorized reel support with pneumatic locking and automatic tensioning of the adhesive tape dragging by a motorised wheel driven by Encoder and Inverter
- the HA range can apply different kinds of handles coupled with the transparent adhesive tape: in pre-cut cardboard, rolls of pre-handled adhesive tape and rolls of paper or polypropylene handles
- FLXMOD® control system equipped with 4.3" graphic LCD control panel and PLC.

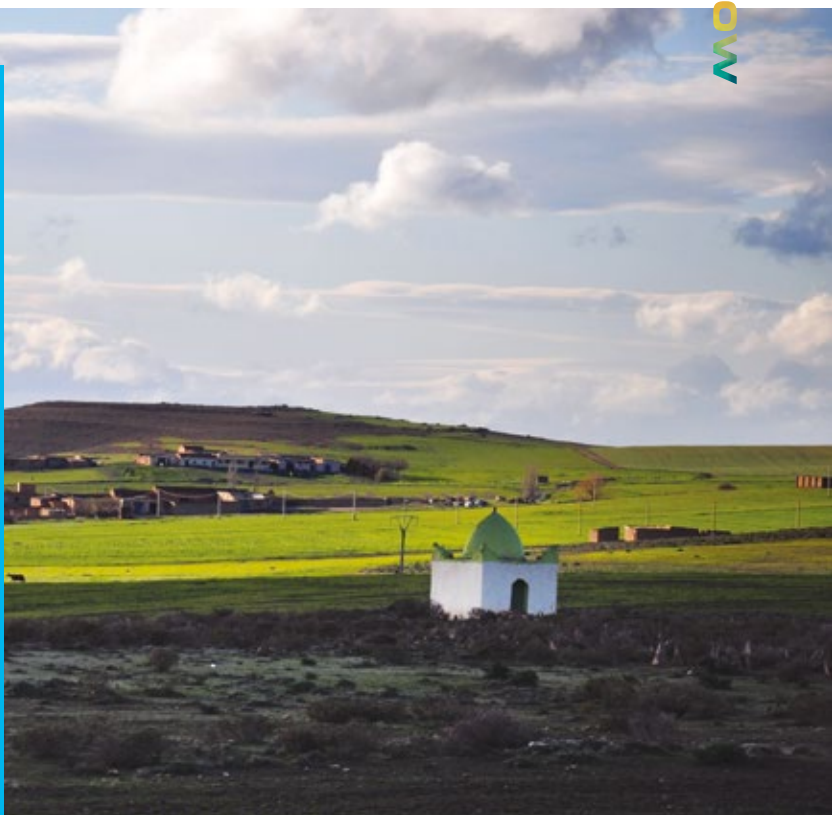
➤ PACKSORTER PACK DIVIDER-SORTER

Packed products: packs in film only of 0.33L and 0.5L bottles in 4x3 and packs in film only of 1.5L bottles in 3x2 coming from the SK 800 F.

Lanes formed: 2

Main advantages:

- automatic device that receives packs in single lane from the SK800F shrink wrapper upstream and, thanks to the innovative sorter system on three Cartesian axis (x, y, z), it puts them into two lanes channelizing them towards the APS 3090 P ERGON, automatic palletising system downstream
- the use of high quality materials guarantees its operational reliability and long life
- safety protection guides in aluminium and lexan
- reduced plant running costs
- low energy consumption motors
- sliding protection doors in curved anodised steel, that allow all motors to be positioned on the exterior to facility cleaning and maintenance operations.







➤ APS 3090 P ERGON AUTOMATIC PALLETISING SYSTEM

Packed products: packs in film only of 0.33L and 0.5L bottles in 4x3 and packs in film only of 1.5L bottles in 3x2 coming from the pack divider/sorter.

Pallets formed: 1000x1200 mm pallet.

Main advantages:

- the central column is actuated by brushless motors, which guarantee highly dynamic, reliable and precise movements of all axes of operation and ensure a high level of reliability, reduced maintenance and low operating costs
- entrusted with Sercos Fieldbus innovative technology, thanks to which the operator, by means of a simple and intuitive man-machine interface, can easily and rapidly manage all the end of line palletising operations
- the palletiser is equipped with a PLC which monitors all the correct functioning of safety devices, integrating their performances for a safe intersection between areas of handling inside the machine perimeter, dramatically reducing machine down-time, both in an emergency and during pallet loading operations
- low running and maintenance costs.

➤ CONVEYORS

Function: transporting loose and packed bottles in PET, in particular: moving outfeed bottles from the integrated ECOBLOC® ERGON system, moving packs between the SK 800 F ERGON shrink-wrapper and PACKSORTER divider and in infeed to the APS ERGON palletiser.

Main advantages:

- the loose product conveyors installed at the Sarl Tousnina factory guarantee, the fluid, constant movement of all containers, without any hitches, to the SK 800F infeed and of the packs in the section between the shrink wrapper, pack sorter and palletiser
- latest generation Posyc® control panel, equipped with LCD colour touchscreen, to allow the operator to intervene easily and intuitively
- sophisticated sensors positioned in strategic places allow high levels of operational efficiency in every phase of the production cycle.

➤ ROTATIONAL STRETCH BLOW- MOULDER EBS 4 ERGON

Functions: apart from the Lejdar water bottling line, the Algerian company Tousnina also bought an SMI rotary stretch blow-moulder EBS 4 ERGON to produce 0.5L / 1.5 L and 2 L bottles in PET to bottle carbonated beverages with a maximum production speed of 8,400 bottles / hour.

Main advantages:

- completely electronic blowing technology developed to reach high production and optimise performance of each cavity
- compact and flexible machine, with cutting edge technology
- stretch blow-moulding module equipped with motorised stretch rods, whose function is controlled electronically, it does not need mechanical cams
- heat reflecting panels made from composite material, mounted at the front and at the rear of the infra-red lamps to increase the intensity of the thermal rays and therefore, reduce energy costs
- guaranteed precise heating profile for each pre-form
- management and control of each mould and therefore, of each cavity
- rapid format change over and mould substitution
- reduced running and maintenance costs
- low consumption of high pressure compressed air, thanks to the Air-Master air recovery system and the low dead volume in each stretch-blow moulding station.

THE LONG HISTORY OF TIARET

Situated at around 150 km from the Mediterranean coast, in south-west Algeria, Tiaret is in the region of the Atlas Mountains (central plateau of Algeria). The presence of numerous megalithic monuments in the province of the same name, are witness to the long history of which Tiaret can be proud. The city today, with around 150,000 inhabitants, is built on a site which was originally a Roman station or a stopover for merchants, travellers and armies, as can be seen from the origin of its name (Tiaret or Tahert or Tihert), which in Berber, means "station".

Tiaret was founded by the Romans, who gave it the name Tingurtia (from which today's name derives, with the same meaning "station"), during the Byzantine period it became the capital of western Algeria and later on the capital of the Berber reign. The testimonies of this period can be seen in the near vicinity of Mount Hadjar where you can visit the "Jedar", a group of stepped pyramids, up to 30 metres high, with square foundations, probably used as tombs for the Berber princes (Amazigh) in the sixth and seventh century. Tiaret was also an important Arabian city in the seventh century, known as Tahart ("Lioness"), while

in the following centuries it fell under Turkish control and finally in 1843, under the French. Thanks to its strategic position, Tiaret has always been an object of conquest, even though it wasn't particularly appreciated by the local tribes of Berbers, the arrival of the French in the XIX century brought it a certain degree of stability and economic prosperity. The favourable climate together with the availability of water created cultivations and the breeding of livestock, in first place horses, Arabian thoroughbreds. The availability of stream water helped the development of bottling industries as can be seen by the business activities of Tousnina Sarl.



UNIQUE AND APPEALING DECORATIONS!

In the beverage industry, the development of an innovative container in PET, with a unique design and highly desired finishing touch, is without a doubt an efficient way to attract attention and choices of the final consumers. Starting from the requirements of the Algerian customer, who wanted to reproduce the company logo, also present on the label, on the shoulder of their 0.33 L, 0.5 L and 1.5 L bottles, the SMI bottle designers created very original containers characterised by elements of "appeal" which are able to add value to a light, unbreakable, economical material like PET. The image of the logo, that reproduces the typical Berber mausoleums of the nearby "Jedars" archaeological site, was elaborated to give an original and captivating look making the Lejdar bottle immediately recognisable for its shape and "design". The most particular aspect of the decoration, reproduced on all the bottom part of the bottle, reminds you of a stone wall, typical of the Jedars, that ideally connects the brand to the archaeological site from where it originated.



NOT ONLY DESERT: DISCOVERING THE SITE OF THE “JEDAR”



Algeria is not only desert, for example, the city of Tounsnina seems to be lost in the boundaries of the famous “Jedar”, Berber funeral tombs that give a magical atmosphere to this place that seems to be suspended in time. Today, the Jedar are in ruins, even though it is surprising that they are still standing after all this time and events. From a tour around the structure you can see, on the first stones placed on the ground, a few bas-reliefs, some show animals such as the lion, the giraffe or the pink flamingo (in each case animals present in the region at that time). Some stones show scenes, you can see a man holding an animal, that looks like a horse, tied to a leash. The door and the few stones that go down towards the interior of the mausoleum are on the western side. Everything in the mausoleum is “black and cool”, the coolness that rules the mausoleum is that of dark places, of isolate places not pierced by the light. It is

the glacial coolness of tombs that flows around the large mausoleum stones. One stone must have been the door, on the inside, as soon as you have gone over the threshold a corridor leads you, sometimes to the right and sometimes to the left, at the end of which, there are three rooms with paintings showing Berber themes, that today can still be seen on ceramics and rugs.



→ THE "JEDAR" MAUSOLEUMS

Jedar is the modern archaeological term used to refer to thirteen Berber mausoleum monuments situated south of Tiaret in Algeria, built presumably in the IV century. The tombs are situated on the peaks of two hills in the mountainous area of Frenda, about 30 km south of Tiaret. There are three Jedar on Jabal Lakhdar and 10 on Jabal Arawi (known also as Ternaten), 6 km north of the first group. The position and size of them suggests that they were built for the royal family, these extraordinary monuments have been systematically plundered for centuries and for this reason, today they are in ruins. The Jedar were built directly on the ground, or with very shallow foundations, stones were dug from the limestone or local sandstone and in some cases were re-cycled in nearby settlements or in older necroplois. The thirteen Jedar that are still around today, show a lot of characteristics in common with the Berber tombs called "bazinas", these are smaller and more common in the pre-Sahara area but show how these mausoleums were a tradition for the Berber natives, even though they had the use of Roman technology and a Christian, Mediterranean iconography.



THE ORIGIN OF THE TERM “BERBER”

It was the Romans, who occupied the region for almost six centuries, who used the term «barbarians», intended as something different to their culture, for the indigenous population of the southern shores of the Mediterranean, whose origins go back as far as 5,000 years B.C. The name was later translated by the Arabs into “barbar” and then by the French into “berbère”. In reality the “Berbers” were the guardians of a remote civilisation of indigenous North-African population, that lived in a vast area known as “Tamazgha”,

which corresponds to the modern states of Morocco, Algeria, Tunisia and Libya. Their alphabet the “tiffinagh”, is considered to be one of the oldest in the world and is still used today by the Tuareg in southern Algeria. After various events that saw them become less and less independent, the Berber reign lost their independence in 40 A.D. under Caligula. During the Roman domination, lots of Berbers discovered art, in politics and in religion, expressing themselves in the written language of the time, in Latin. There were lots of writers (from Terence to Martianus Capella), Christian saints (Saint Cipriano, Saint

Victor, Saint Augustine and Saint Monica), popes (Victor I, Melchisedech, Gelasius I) and emperors (from the Libyan-Punic Septimius Severus, founder of a dynasty, to Macrinus and Emilianus) of undoubted Berber ancestry. After being under Roman rule for such a long period, North Africa was invaded in the V century by the Vandals from Genseric, who built the North Africa kingdoms, until in 534, an expedition led by Belisarius, sent by Justinian I, reconquered it to the supremacy of Bizanzio. This domination lasted little more than a hundred years, as in the VII century new invaders arrived, the Arabs.





A group of people are clinking their beer bottles in a toast. The bottles are filled with golden beer and have condensation on them. The background is a clear blue sky. The text 'PBBH' is written in large white letters across the middle of the image, and 'PALABRAUHAUS' is written in smaller white letters below it.

PBBH

PALABRAUHAUS

➤ **BEER SECTOR**

FLOREM SNC - PALABRAUHAUS (PBH)

Palazzolo sull'Oglio (Brescia), Italy

www.pbh-beer.it

- ENOBERG Monoblock
rinser-filler-capper 5-5-1



GEO LOCATION

A BEER IS...

THERE ARE SO MANY TALES THAT CAN BE TOLD OVER A BEER, TALES OF LIFE AND EVENTS, OF EVENINGS SPENT WITH FRIENDS OR IN THE HULLABALOO OF A VILLAGE CELEBRATION, TALES THAT ARE HEARD FROM A RADIO OR READ FROM THE COMPANY OF A BOOK...

WHEN, IN 2001, NICOLA VITALI FOUNDED, THE PALABRAUHAUS (PBH) BREWERY WITH THE ATTACHED "BREW PUB" AT PALAZZOLO SULL'OGLIO IN THE PROVINCE OF BRESCIA, SO MANY THINGS, COLOURS, AROMAS AND FRAGRANCES APPEARED.



Today the history of the Palabrauhaus brewery is a story of surprises, twists, daring choices and great successes. Recognised even abroad, as it has taken part in prestigious international contests, such as this year's "Barcelona Beer Challenge (*); that compares beers from all over the world. Right from the start of its activity, PBH focused on quality, purity and fragrance, and it

was one of the first companies in Italy to appreciate non-pasteurization, low fermentation and the cold chain. It is among one of the most recent tales that today we can tell, it involves ENOBERG, a company which is part of the SMI Group, and which recently supplied a monoblock from the ELC range to rinse, fill and cap 500ml glass bottles with beer from the PBH brand.



➤ BARCELONA BEER CHALLENGE 2018

This is a relatively new competition but already respected by global experts within this sector, its aim is to enhance and promote the production, sale and consumption of quality craft beers. In 2018, this renowned beer competition compared more than 1000 beers produced in over 25 different nations and divided into 62 categories, awarding those who respected the highest standards of quality. During this 2018 competition the PBH – Palabrauhaus brewery won the silver medal in the "Weizen" category with its President, a beer characterised by frothy sparkling, thick, soft froth, an orangey yellow colour and a characteristic perfume of ripe fruit with banana and apple standing out. PBH won the bronze medal in 2017 thanks to Elizabeth, a beer of the "Barley Wine" kind, with an alcohol level of 11,2° and intense and intriguing perfume.



DRINK
PASSION..
TASTE
FEELINGS:
EACH BEER
HAS ITS OWN
PERSONALITY



of its ideas, feelings and experiences. Drinking a PBH beer is synonymous of drinking passion, savouring challenges and tasting quality. Each beer produced by PBH has a special dedication, a specific characteristic that is tied to a special person within the company, for example "President" is dedicated to Nicola Vitali, because he worked with this beer a lot, especially at the beginning of the business when he was helped by two German beer experts and graduated at the University of Beer in Munich (the Doements). In 2012, the birth of his first child Stefano, offered the occasion for the first extra-germanic beer: Stephen (IPA), which in very little time won over the favours of numerous people within this sector and also many fans. In 2014, Nicola decided to dedicate a beer to his unborn daughter Marialaura,, something like the "Belgian Golden Ale (Fiandra)", but fate decided that she would be born on Saint Patrick's day.... so, he created an excellent "Irish Stout" in her honour (Mary Cat).

The main aim of this company from Brescia is to put its passion and culture of beer into products with a level of organoleptic properties, while being accessible to everyone. The new beers in the PBH range, totally represent the company's identity, the careful analysis

↓ **BELOW FROM LEFT:** NICOLA VITALI, OWNER OF PBH PALABRAUHAUS AND FABIO BONALDI, SALES MANAGER AT ENOBERG S.R.L.



And if there is a president we must also have a "First Lady", the beer dedicated to his wife. "Drulù" beer, strong, distinguished and with a German touch, is dedicated to Vitali's father and takes its name from the place where the patron of BPH played as a child. To his mother who often works in the background, he dedicated the beer "Backstage".



BELOW: AT VINITALY 2017 NICOLA VITALI RECEIVES BRONZE IN THE CATEGORY FOR LOW FERMENTATION WITH HIS BEER "FIRST LADY"

PBH IN NUMBERS



2001: year that Palabrauhaus was founded



138.000: litres of beer produced yearly (dated 2017)



9: labels of beer produced



395: draughts a day



42: events organised every year

FOR HIGH LEVEL PROPOSITIONS WE NEED PLANTS WITH A HIGH LEVEL OF TECHNOLOGY

The business philosophy of Palabrauhaus gained its great approval from the general public and its employees. Today, this philosophy can be summarised in four main points, even if the company from Brescia is continually researching perfection and will have lots of other tales to tell:

- 1) low fermentation:** the activity at PBH focuses on micro-productions with low fermentation, able to eliminate the unsightly sediment at the bottom of the bottle
- 2) cold chain:** the beers are not filtered or pasteurised because they become clear after being correctly matured in the cold to maintain their fragrance, taste and aroma
- 3) microbiological purity:** each batch of production is examined sensorially by a "panel" of expert tasters and "Biersommelier" to guarantee that the product reaches the high expectations, certified by an accredited laboratory
- 4) technology and know-how:** two important aspects of the company's aims. For this reason, all the investment choices are driven by the desire to have high quality systems with a high level of technology.



ENOBERG SOLUTIONS FOR PALABRAUHAUS



To bottle their own brand beer, PBH chose the experience of ENOBERG, who supplied a "Microblock" ELC 5-5-1 C system containing a rinser, isobaric electro-pneumatic filler with dual pre-evacuation system and single-head crown capper. ENOBERG supported the customer during planning, construction and installation of the system which runs 850 bottles/hour equipped with the most advanced technological solutions for the beer industry. The solution supplied by ENOBERG endorses the "aim" and the strong growth drive of this company from Brescia, that has invested in innovative machinery to be able to increase production capacity and satisfy the growing request from the Italian and foreign markets.





➤ MONOBLOCK ELC 5-5-1 C SYSTEM

Functions: rinse, fill and cap 500ml glass bottles, with a production capacity of up to 850 bottles/hour.

Main Advantages:

- valve equipped with elevated regulation flexibility for the filling cycle, where the precise timings of vacuum and filling are guaranteed by the PLC machine control
- compact and multi-functional structure that allows the monoblock to fit into very small spaces
- motorised rinsing system with length regulated by the nozzle, allowing a quick changeover from one size to another
- dual pre-evacuation system with liquid ring vacuum pump, for low oxygen “pick-up” making the beer last longer while maintaining the taste
- solid and durable construction
- electro-pneumatic filling technology with high flexibility, to fill all kinds of beer and cider
- single-head capping system, that works in a continual cycle capping the bottles when they are in the correct position
- possibility to set the force of the capper during the cap application and closure phase.



FROM SCARVES TO BEER: WHEN CRISIS IS THE BEST THING THAT CAN HAPPEN!

Between one beer and another, learning about the history of Palabrauhaus brings us to remember a famous quote from the past, one spoken by the scientist Albert Einstein in the text "the world as I see it" from 1931. In this thought, crisis is defined to a "blessing" and even though it might seem like a provocation to the person that is living the dramatic situation, sometimes it turns out to be the change towards success. The famous quotes by this German-Jewish scientist are incredibly current, even for the Vitali brewery, because the success of BPH starts from a crisis, that of his father Alberto's previous company, the Florem. The Vitali family made winter scarves and gloves, but, following the crisis at the beginning of 2000, the owner decided to convert the activity into producing beer. An incredible challenge, accepted with enthusiasm by his son Nicola and completed in just a few months by installing a Kaspar-Schulz system, leaders



in brewery plant manufacturing. On the 10th October 2001, the production of Palabrauhaus Craft Beer officially began, one of the first productions on the Italian craft brewery scene and today, to satisfy the growing market demand the company from Palazzolo sull'Oglio has invested further to automate the filling and capping process of the glass bottles and have modern production technology like that of the monoblock ELC supplied by ENOBERG.



CHALLENGE BRINGS PROGRESS

"Let's not presume that things will change if we carry on doing them in the same way. Crisis is the best thing that can happen to a person and to an entire nation, because it is crisis that will bring progress.

Creativity is born from anxiety, just as day comes from the dark night.

It is during a crisis that inventions come to mind, that discoveries and great strategies are found.

Whoever overcomes a crisis, overcomes themselves without being overcome.

Whoever blames his defeats and mistakes on a crisis, violates his own talents and gives more respect to problems rather than solutions. The real crisis is the crisis of incompetence.

The biggest mistake of people and nations is that they are too lazy to find solutions.

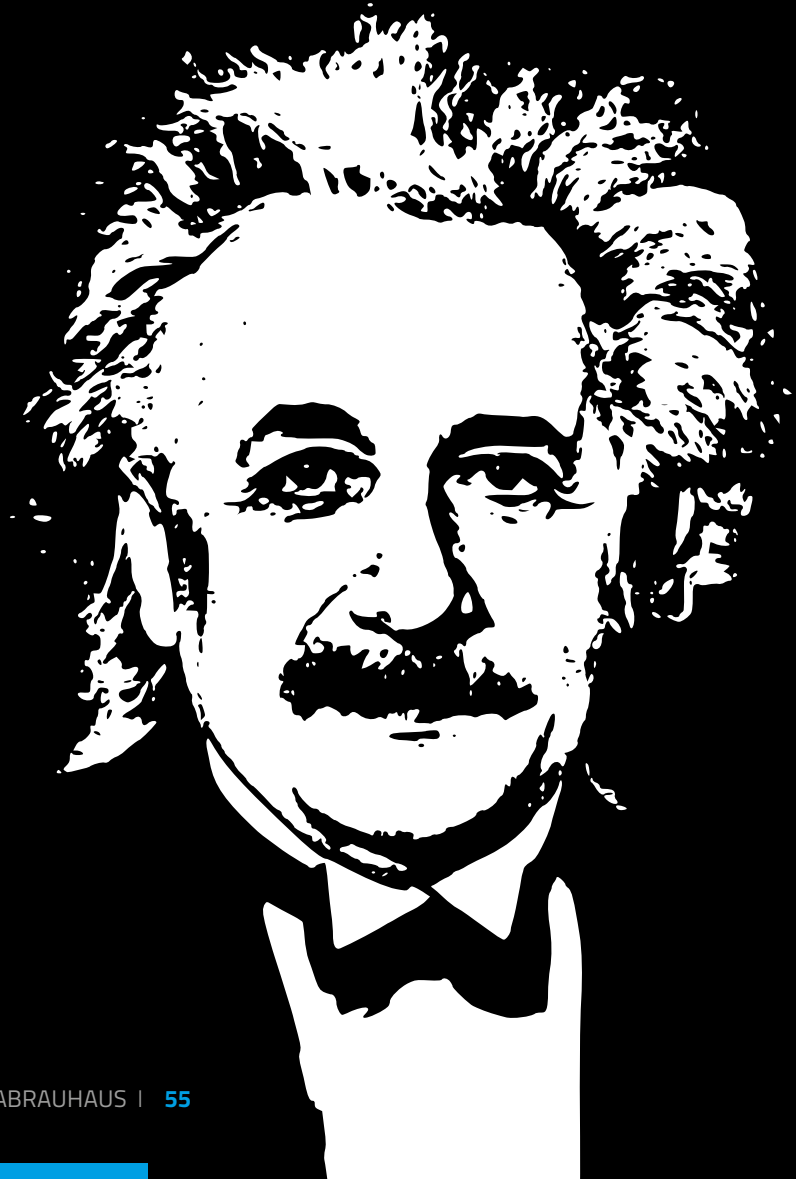
Without crisis there would be no challenge, without challenge life would be a routine, a slow agony. Without crisis there would be no merit. It is during a crisis that we show the best of ourselves because without crisis any wind is a caress.

When we speak about crisis we create movement, adapting to it means glorifying conformism.

Instead of this, work hard!

The only threatening crisis is the tragedy of not wanting to fight to overcome it."

Albert Einstein – from "The world as I see it" - 1931



SPEAKING TO THE CUSTOMER

→ INTERVIEWING NICOLA VITALI Owner of PBH Palabrauhaus, Brewer and Bier sommelier



D: What are the significant events from 2001 until now, that have brought success to PBH and its beers?

R: In the beginning, our production was solely for use within the pub next to the brewery, then from 2004, we began to sell our beer in "tanks" of 500 and 1000 litres, supplying mostly to beer festivals, village fetes, festivals and events in general. In a short time, however, apart from these maxi containers, our beer began to be requested in bottles and barrels, making it necessary to increase production. So that we can maintain a high level of quality, we carry out continual micro-biological tests on the equipment and on the beer, we also use high quality technological systems and take part in refresher courses. From all of this we have our "mission", know what

we are doing and do it to the best of our possibility.

D: How did you come up with the idea of creating the Brew Pub next door to the brewery? How important is it to your activity?

R: It was my father Alberto and the architect who was designing the new building, who came up with this strange idea, we modified the use of the existing building, changing it from producing knitwear to craft brewing. The Brew Pub was created as a support for the sales of our beer and over the years it has become an important element for the growth of our company.

D: What are the main reasons why you chose to invest in a monoblock ELC 5-5-1 supplied by ENOBERG?

R: For almost a year we evaluated several companies who produce isobaric fillers. At the beginning we were very undecided, between buying a mechanical system or an electronic one, therefore, we decided to look at the pros and cons of the two options, carefully studying the particular techniques of each offer, evaluating the competence and preparation of the supplies towards our needs. Here ENOBERG, above all thanks to the support of Francesco Metelli (R&D & Production Dept. Manager), stood out in every aspect of the negotiations, keeping promises and expectations. Today, after 4 years of using the monoblock that they supplied, I can say that the reliability and quality of bottling has always been satisfactory to our high standards.



D: For quality beers you need quality equipment! What do you require from suppliers of bottling and packaging machinery?

R: I strongly believe that the packing line does not and cannot improve the product, but it must keep it the same from bottling to consumption, therefore the equipment is good quality, if it doesn't alter the product during filling, and if it can be sanitised easily.

D: What trends do you see the beer market taking, over the next 5 years?

R: For a few years now, the multi-national breweries have been taking more interest in the world of "craft beer", changing the Italian market. They are taking over some Italian brands and introducing pseudo-craft (the so called "crafty") beers onto the market, for consumers it's getting harder and harder, to understand if the beer has been produced by an independent brewery or by a big industrial brand. I believe that over the next 5-10 years the Italian market will be very divided between a few big brands, a lot of which are controlled by industry, and lots of tiny local producers restricted to the area where they come from. The work of artisans will always be the same, work hard to make your quality product known so that the consumer can clearly tell craft beers from industrial ones.



➤ WAITING FOR CHRISTMAS WITH THE BEERENDAR

With the exclusive Advent BeerENDAR created by Palabrauhaus, the build up to Christmas is unique, all to be tasted. The 2017 edition was very successful with consumers, who, during the month of December, opened the relative window and each day found a 500ml bottle of one of the craft beers produced by PBH. Each morning, from the 1st to the 24th December, it is possible to "uncork" the cardboard lid from the box and put the bottle in the fridge so that it can be tasted during the day.



BREWER AND "BIER SOMMELIER", NICOLA VITALI BEGAN HIS FORMATION "HANDS ON" IN 2001 AFTER VARIOUS COURSES IN GERMANY (DIPL. DOEMENS AKADEMIE MÜNCHEN) AND SHORTLY AFTER HE LAUNCHED THE KASPAR-SCHULZ SYSTEM IN HIS BREWERY, WORKING WITH TWO "BRAUMEISTER" EXPERTS WHO GRADUATED FROM THE FAMOUS UNIVERSITY OF WEIHENSTEPHAN. THE FAMILY COMPANY CONTINUED PRODUCTION, CONSULTATIONS AND SAMPLING EVENINGS, TOGETHER WITH VARIOUS REFRESHER COURSES, CARRIED OUT WITH PASSION AND TEUTONIC FORMATION, ALL OF WHICH CAN BE SEEN IN THE COMPANY'S MOST FAMOUS BEERS: DUNKEL, HELLES, WEISS AND BOCK. IN 2012, NICOLA VITALI WAS AWARDED THE ACADEMIC TITLE OF BIER SOMMELIER WITH A MARK OF "EXCELLENT". UP TO NOW, EVEN AT HIS YOUNG AGE, THE PATRON OF PBH IS THE BREWER WITH THE MOST YEARS OF WORK EXPERIENCE IN THE PROVINCE OF BRESCIA AND ONE OF THE PIONEERS IN ITALY.

NOT ONLY BEER.

PALAZZOLO SULL'OGLIO ART, CULTURE AND NATURE.

The Palabrauhaus company has its headquarters in Palazzolo sull'Oglio, a beautiful town with around 20,000 inhabitants, that is situated in the province of Brescia on the banks of the river Oglio. It is rich with art and historical

testimonies bound to its past, which saw it invaded by Romans, Venetians, Neopolitans and Austrians. The town, as it stands at the moment, was established in 1192 by a fusion of fortified hamlets from Riva and Mura, which, over the previous centuries had had varied clashes

over the control of the river. On the left bank of the Oglio you can see the square tower of Mura called the "Rocchetta", fortification that marks the beginning of the medieval hamlet of Mura, that is the heart of Palazzolo. On the right bank you can see the Castle of Palazzolo, the "Rocha Magna", military fortification of the medieval era, built from large stones from the river, formed by four towers joined





together by imposing walls, surrounded by a wide moat. Leaning on the circular tower of Mirabella, you can see the Torre del Popolo, which is still the symbol of the town, and with a height of 92 meters it is the tallest, circular civic bell tower in Italy. The town is part of the North Oglio Park circuit, that, with its seven nature reserves, is fascinating with its variety of flora and fauna on the land and in the rivers. For a few years there has been an event called "The wonders of the land and the river", which publicises, values and promotes the historical patrimony. During this event all public representative buildings and monuments in Palazzolo sull'Oglio, are open to the public and there are also lots of events such as musical shows, concerts, public readings, games for children, sport events and ... naturally a visit to the brewery to discover where and how PBH beer originated.

➤ **STOP AT THE BREW PUB: FROM THE FACTORY TO THE CONSUMER!**

Not far from Lake Iseo, PBH has created, next to its brewery, the Brew Pub, a place to go for a delightful work lunch or an evening with friends, spent happily and tastefully. The pub has a unique touch, a place where you can feel the welcoming family atmosphere. Rivers of PBH Craft beer flow from the 16 taps at the counter, tapped from the tank into the cell (cask conditioned method) to maintain the natural carbonation of the products. Between one beer and another you can try sandwiches, focacce, piadine, various fried dishes, plates of typical cold meats or the special "spianata", a type of soft easy digestible pizza. At the moment PBH beers are available in 0.33, 0.5 and 0.75 litre bottles or in kegs of 10 and 30 litres and in 500 and 1000 litre "tanks".





LAKE ISEO: A GEM OF RARE BEAUTY

Straddling between the provinces of Bergamo and Brescia, right at the end of Val Camonica, you will find Lake Iseo, a prealpine basin formed by water from the river Oglio, in the middle of this lake there is the largest and tallest lake island in Italy: Monte Isola (or Montisola). Lake Iseo is a gem of rare beauty, ancient hamlets rise on its banks, such as Pisogne, beautiful squares like that of Porto in Lovere, and pretty towns like Riva di Solto. Iseo is the ideal place to go for a walk on the lakeside, or to throw yourself into art, visiting the nineteenth century square, home to the evocative Pieve di Sant'Andrea, while Clusane di Iseo is the queen of local cuisine, thanks to its characteristic restaurants where you can try baked

tench or doctor fish and other typical local fish. Nature and art work together harmoniously on Lake Iseo, a bond that became even more evident in 2016 when the surface of the lake became an enormous natural canvas on which the Bulgarian artist, Christo, showed the world his new temporary installation, The Floating Piers, a temporary floating pier, that allowed people to walk on the lake and which could be seen from the surrounding areas. A boat ride on the lake is a must for a beautiful experience and to explore the basin from a different viewpoint. The pearl of the lake is Montisola, a mountain on an island, that divides the lake in two (the banks of Brescia from those of Bergamo) and which is fascinating for the peace and slow rhythms that distinguish it.



SFP ERG



ON

ENERGY SAVINGS WITH THE NEW "GREEN" SFP 30 PACKER

We speak more and more about the importance that environmental sustainability is having on company investments, companies choose production machinery and plants that are compatible with the most recent standards that respect the territory and energy savings. In fact, in the "board rooms" of large and small companies, everyone is aware of the fact that choices made today in the world of industrial production, will play an important role in determining the future

quality of life and eco-systems in which we all live and work. In this sense, the requirements of companies in the "food & beverage" sector are met by SMI and their suitable, innovate replies, resulting from continual investments in research and the development of new "green" products and technology. Consistent with this "vision", SMI recently launched a new packaging machine with stretch film, the SFP 30 ERGON, which perfectly combines the necessity to reduce the use of plastic and energy consumption in packaging plants.

➤ SFP ERGON max 30 ppm

- continual packaging in stretch film
- wrapping of packs in film only, in 2xn formats
- 7" interactive touchscreen operator panel in 32 languages with simple, intuitive commands
- low energy consumption, thanks to the absence of the shrink tunnel
- stable, resistant packs, thanks to the double crossed wrap of film around the group of containers to be packed



SFP ERGON

THE ADVANTAGES OF THE SFP 30 PACKER IN EXTENDIBLE FILM

The new packaging system thought up by SMI, for a new range of machines uses “stretch” film instead of shrink wrap to pack loose products, completely eliminating the electrical tunnel at the end of the packer. This technical innovation has a lot of immediate advantages from an environmental sustainability and energy-saving point of view:

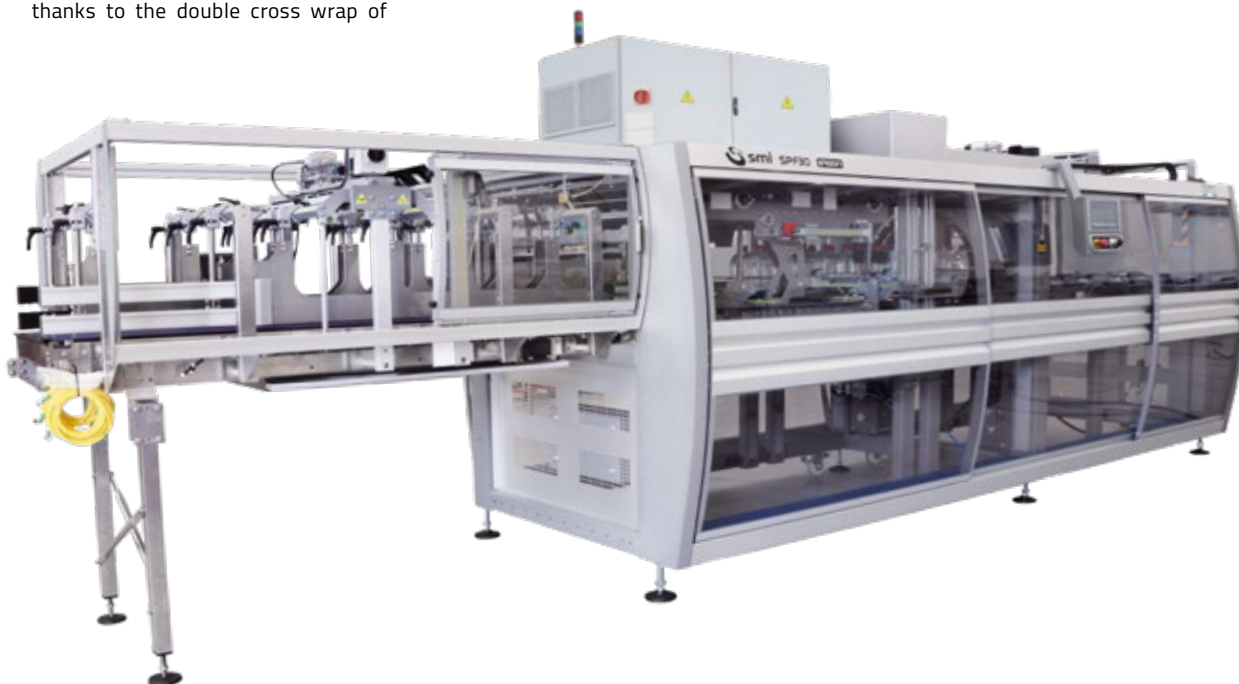
- less packaging material (-30/-40% vs. traditional packer), as this kind of packaging uses 10 micron extendible film
- considerable energy savings, thanks to the absence of the shrink tunnel and its electrical resistances
- creation of strong and stable packs, thanks to the double cross wrap of

film around the group of containers to be packed

- easy machine access, thanks to the ergonomic design of the system (typical of the ERGON range)
- automation and management technology by MotorNet System® using Sercos fieldbus
- motors equipped with integrated digital servodrivers. This solution generates less heat inside the electrical cabinet, thus reducing energy costs of heat waste and air conditioning fitted on the machine.
- fewer CO2 emissions, and therefore more benefit to the environment



- cosmetic advantages: the “bulls eye”, typical of packs created in film only, is much smaller and it is on the short side of the pack.



MAIN CHARACTERISTICS OF THE NEW SFP 30 PACKER

The SFP 30 packer responds perfectly to the requirements of flexibility, versatility and eco-sustainability for packing numerous configurations 2 x n, in film only.

The continual packing in stretch film, is a simple and ergonomic system which develops in the following phases:

- **loose product infeed:** the machine infeed conveyor, equipped with chains made of thermoplastic material featuring low friction co-efficient has a

special system of motorized oscillating channeling guides to facilitate the correct channeling of loose products on the conveyor towards the pack forming area

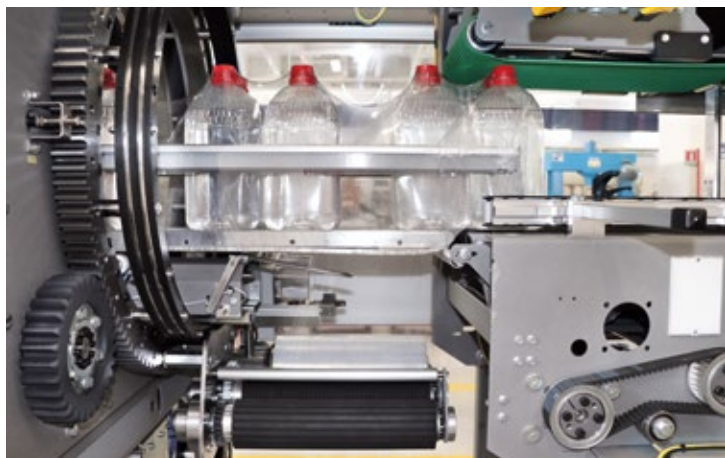
- **product separator:** the loose containers are grouped in the desired format by means of a mechanical system containing a synchronized press with compensation bars. The bundles created then proceed short side leading (packs in 2 x...)

- **film unwinding:** is carried out by "brushless" motors (one for each of the

two reels present on the machine

- **film winding:** the system carries out a double crossed wrap, around the group of containers in transit, the first reel wraps it clockwise, while the second wraps it anti-clockwise creating a resistant long lasting pack

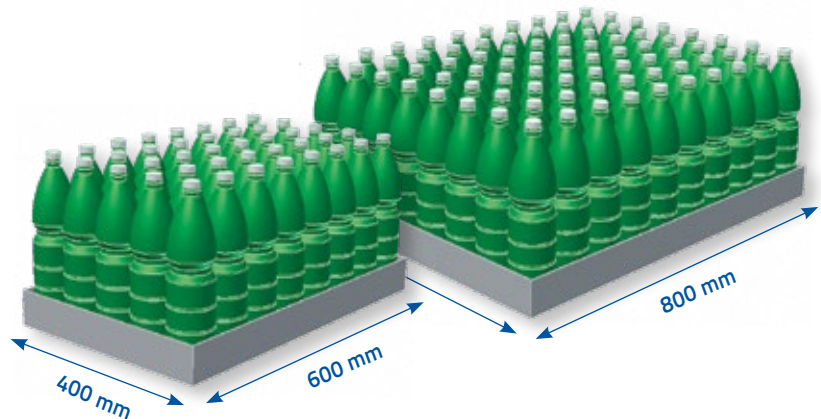
- **film cutting:** this happens by means of an innovative vertical heated resistance system managed by "brushless" motors. The cutting operation happens in 2 phases, in front of and behind the pack in transit.



PALLET DISPLAY

THE IDEAL TRAYS FOR LARGE RETAIL ORGANISATION

The Large Retail Organisation (LRO) is often looking for logistical solutions that are able to reduce storage and pack management within their retail outlet, for this reason customers appreciate very big packs, that hold a large number of products. This solution helps provision storage and the positioning on the shelves in the retail outlet, guaranteeing advantages in economic and logistical terms for all the distribution supply chain. An innovative idea for large sized packs has become reality, thanks to the automatic tray packers, packers and wrap-around case packers from SMI, that are able to pack a wide range of boxes and corrugated cardboard trays of standard size or in "maxi" sizes – equal to a $\frac{1}{4}$ europallet (400x600 mm) and $\frac{1}{2}$ europallet (600x800 mm) - called "pallet display". The "pallet display" trays are perfectly compatible with SMI palletiser systems from the APS range, this combination therefore, allows a significant reduction of total production costs, thanks to the integration of secondary and tertiary operations.



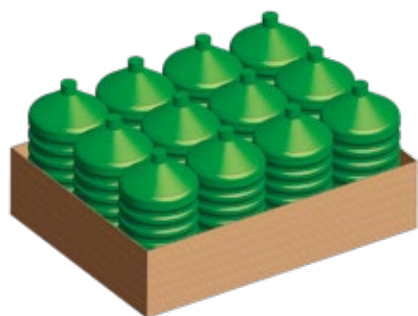
PALLET DISPLAY
VIDEO
scan this QR code

PALLET DISPLAY

A SIMPLE, ECONOMIC AND ECO-COMPATIBLE PACKAGING SOLUTION!

The use of SMI packers in the versions that are suitable to manage "pallet display" offer numerous advantages, among which:

- simplification of secondary and tertiary packaging operations
- reduced running and maintenance costs for all the production line.
- reduced stock of spares
- improved use of operators responsible for plant management
- achievement of significant savings in terms of TCO (Total Cost of Ownership) of the bottling and packaging line, thanks also to the possibility of working "pallet display" or standard size packs on one machine only




- sustainable solution: the quantity of packaging material used to create the "pallet display" is reduced dramatically
- energy saving: less use of plastic and cardboard means significant energy saving during the production of the packaging materials, during the packaging procedure and during recycling operations.
- simplified palletising: palletising operations are faster and simpler, as the maxi-trays allow the pallet layer formation to be completed with a fewer number of insertions (in the 1/2 pallet format, only two packs per layer)
- no storage problems: comparing an equal number of packed containers, the "pallet display" trays considerably reduce transport operations along the distribution chain, and also the positioning of the single unit of product on shop and supermarket shelves is faster and more efficient as the operator optimizes the time it takes to collect the packs that need to be emptied from the warehouse.

A SHRINK TUNNEL FOR EVERY REQUIREMENT

SMI offers a wide range of shrink tunnels, each with cutting edge technology to limit energy costs and guarantee maximum environmental compatibility. For example, the new version of ST ERGON tunnels manage the distribution of hot air flow on all the surface of the forming pack efficiently and consistently, guaranteeing a high level of shrinking. Furthermore, at the tunnel outfeed, the pack undergoes an immediate cooling process, by means of an advanced ventilation system, this sets the shape, the appearance and rigidity to prevent deformation or breakage during the following packing stages. SMI shrink tunnels are designed to allow the operator to have easy access, in complete safety, to the internal parts of the system during maintenance and cleaning, which, compared to other traditional systems are much smaller. The ovens in the ST ERGON range are available fuelled by electricity or by

COMPARISON BETWEEN TUNNELS WITH DIFFERENT KINDS OF FUEL

<p>TUNNEL FUELLED BY ELECTRICITY</p> <p>Consumption of electricity = 26.68 KWh</p> <p>Average cost of electricity = 0.13€ / KWh*</p> <p>TOTAL COST = € 3.46 for every hour running without product</p>	<p>Characteristics considered</p> <ul style="list-style-type: none"> ▪ Tunnel temperature 200°C ▪ Speed of the tunnel conveyor 13.4 m/min ▪ Auxiliary fans off <p>TUNNEL FUELLED BY METHANE GAS</p> <p>Consumption of gas = 3.33 m³</p> <p>Consumption of electricity = 2.46 KWh</p> <p>Average cost of methane gas = 0.33€ al m³*</p> <p>Average cost of electricity = 0.13€ / KWh*</p> <p>TOTAL COST = € 1.41 for every hour running without product</p>
--	--



(*) referred to costs of electricity in Italy in 2017.



methane gas, where the necessary heat for shrinking the transiting packs is obtained by the combustion of methane rather than the special electrical resistences.

The tunnels fuelled by electricity can be equipped with fibre glass chains (standard supply) or with metal chains (standard supply or optional according to the model of machine):

- Fibreglass hold the heat more efficiently, therefore, reducing energy consumption. Also, the film rarely leaves residue on this kind of chain.
- The metal chain releases more heat, therefore consumption is slightly higher, but at the same time it guarantees improved film sealing under the pack.

SHRINK TUNNELS FUELLED BY METHANE GAS

Accurate laboratory tests show that, in countries where natural gas is available at convenient prices, the use of a methane fed shrink tunnel guarantees a saving of 60%(*) compared to energy consumption of a traditional tunnel fuelled by electricity. The development of this new range of ST ERGON tunnels fuelled by gas began with this consideration, to offer innovative technology and with low environmental impact, to customers who have a supply of methane gas at advantageous prices. This pack shrinking solution, which is highly technological, eco-sustainable and with a reduced environmental can be combined with all the shrink wrappers and combined packers produced by SMI.

(*) referred to costs of electricity in Italy in 2017.



➔ MAIN ADVANTAGES OF A TUNNEL FUELLED BY METHANE GAS

- reduction to costs for electricity supply
- ideal temperature is reached more quickly than the ones fuelled by electricity and the consumption of methane is minimal
- high level of safety, thanks to special sensors and systems
- reduced maintenance (the only parts that need to be replaced are the electrodes)
- it is possible to use a thinner film, thanks to improved heat distribution
- low CO₂ emissions, immediate operational availability and considerable energy savings.





Every beer can be distinguished by its unique and particular taste which needs to be maintained until it reaches the consumer so that they can appreciate the quality and flavour. Therefore, to guarantee that the characteristics of the beer are not altered in any way, it is fundamental to have production machines and systems that are reliable and efficient

like the rinser, filler, capper monoblock by ENOBERG. In the beer sector, the production of craft beer by micro-breweries, has become more and more common, so much so that it is now a real "business". People who decide to start a business in this sector need to rely on the experience of machine suppliers, who invest continually in new solutions and that offer a complete range of compact machines which are easy to use, with reduced costs and consumption. In April 2018, ENOBERG opened a showroom where operators from this sector can personally evaluate the most recent technologies for bottling beer within a micro-brewery.



**THE BEST WAY
TO FILL BEER
AVAILABLE TO EVERYONE**

MICROBLOCK FOR MICROBREWERIES



In the ENOBERG showroom you can discover the advantages and closely watch the new ELC 5-5-1 monoblock in operation, it is placed on a line with conveyors and an automatic labeller. The conveyors, required to move the bottles along the line, include a rotating table for the manual loading of empty bottles and a manual unloading for the full, labelled bottles.

The solution that is on show is distinguished for its:

- **compact size and easy operation**, only one operator is needed to manage the complete system
- **quick format change-over**, thanks to the possibility of working different formats and quickly changing from one to another. It is an advantageous solution even for companies who manage low batches of production.



➔ IN ITALY THE NUMBER OF MICRO-BREWERIES HAS GROWN BY 400% IN TEN YEARS

Even in Italy the sector of craft beer is growing rapidly, not only by the number of consumers, but also by the number of producers. The so called "micro-breweries" have increased by 400% in ten years, going from 132 in production in 2005 to 670 in 2015. Maybe for the first time systematically, this trend which is in continual growth, is being monitored by the international study "Economic perspectives of craft beer. A global industrial revolution for beer". The research, which lasted four years, was carried out by the University of Milan Bicocca, the Research Centre of the Bocconi University and the University of Leuven (Belgium) analyzing in detail the craft beer sector in 16 countries. The conclusions of this study reveal a boom in demand and offer caused by "a change in the style of consumption, the requirement of more sophisticated agricultural products and the growing market interdependence".

ELC 5-5-1

THE HEART OF THE ENOBERG SHOWROOM

The ELC 5-5-1 monoblock is the smallest of the ENOBERG range dedicated to the bottling of beer. Recently launched on the market, the ELC 5-5-1 has achieved success with its customers with more than 25 machines installed all over the world. It is a complete “micro-block” for micro-breweries, a complete solution with rinser, isobaric electro-pneumatic filler with dual pre-evacuation system and single-head crown capper, suitable for productions up to 1000 bottles/hour at 0.33L.

MAIN CHARACTERISTICS

The ELC 5-5-1 monoblock has three modules: the rinser, the filler and the capper. A conveyor carries the empty bottles to the rinser module, where a motorized system turns them upside down positioning the neck in line with the correct rinsing nozzle, they can be adjusted in length according to the format that is running.

The Electro-pneumatic is counter-pressure level filling system, after a phase of dual pre-evacuation for low oxygen



“pick-up”, the bottles are taken to the same pressure as the product tank to allow gravity filling.



SHOWROOM

VIDEO

scan this QR code



When the product reaches the level of the venting pipe, the valve closes pneumatically and the decompression phase begins, this brings the bottles to the same pressure as the environment without agitating the filled liquid.

The caps are placed in the right direction and transferred to the capper by means of a special device. The single-head crown capper system works on a continual cycle, applying the caps when the bottles are situated under the tower. A key characteristic of the ENOBERG cappers is the possibility to adjust the strength with which the capper applies and fastens the caps.

➔ **WHO IS ENOBERG?**

ENOBERG S.r.l., a company which specializes in the design and production of fillers for liquid food / beverages, it became part of the SMI Group in 2016. The company has worked on the Italian and foreign markets since 1984 and over its 35 years of activity, has always focused on the design and creation of high quality bottling machines, suitable for production requirements of between 1.000 and 36.000 bottles/hour. The ENOBERG headquarters are in Telgate, a few kilometres from the city of Bergamo, where inside a building of 3.500 m2 work a staff of 30 experts in developing cutting edge technology for bottling water, soft drinks, beer, milk, wine, sauces, preserves, spirits and many other liquids. It was this thirty year vocation to innovation and product excellency, that played the winning card during the purchasing process by the SMI Group, who added this to its own "mission" to carry out constant research into innovative technical solutions.



enoberg ELC 5-5-1

➔ **THE MAIN ADVANTAGES OF THE MONOBLOCK 5-5-1**

- **The filling valve** has a high level of flexibility to regulate the filling cycle, this is controlled by the PLC which regulates the emptying and filling times

- **The compact multi-function structure** enables the machine to be installed even in small spaces

- **The dual pre-evacuation system** with low oxygen "pick-up" maintains the beer longer and preserves the flavour

- **Solid long-lasting construction**, to guarantee excellent return on investment

- **Electro-pneumatic filling technology** suitable for bottling any kind of beer or cider, all you need to do is change the recipe on the display with the touch of a button

- **"Step by step" bottle movement:** all the working phases happen around a single central star. During rinsing and filling, the bottles move in groups of 5, while the capping head applies a crown cap to each bottle as it passes

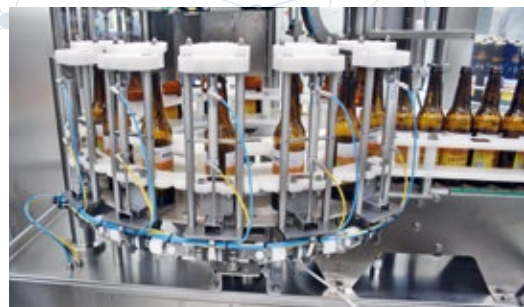
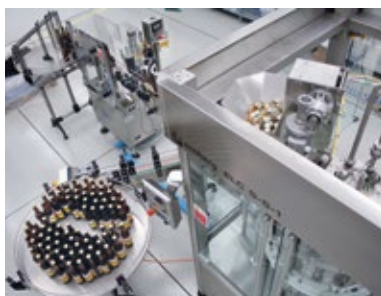
- **All the motors and mechanical transmissions** are installed in the base of the machine to avoid any possible contact with water or product.

- **Quick and simple format change-over:** you just need to adjust the height of the three work stations and replace the central star and bottle guides.

ELC SERIES

The ENOBERG monoblocks in the ELC range are the ideal solution to bottle carbonated products such as beer. Thanks to a series of innovative solutions the ELC range stands out for its versatility of use and easy maintenance. The heart of the machine is the electro-pneumatic filling valve (pneumatic valve propelled

by electro-valve), for gravity level filling. The electro-pneumatic valve, entirely designed by ENOBERG, facilitates the automation of all the bottling operations: pre-evacuation, bottle pressurisation and filling. Equipped with a tank suitable for pressures up to 6 bar, the ENOBERG filler from the ELC range covers a wide "range" of production thanks to its configuration of between 5 to 48 taps. The beer version of the machine is configurable with a device intended to perform a double oxygen pre-evacuation inside the bottle before starting the filling phase; thanks to this optional device, the oxygen in the bottle is almost completely removed, to guarantee a longer shelf life to the beer and to ensure its original taste.





➤ THE PLUS OF THE ELC RANGE

- Quick format change-over of the bottle guide equipment and pre-set software recipes.
- Quick and easy positioning of dummy bottles: the ELC range can be completely sanitized thanks to the dummy bottles and to the piping system, which, according to requirements, can recover or recycle the washing solutions and carry out washing according to the in- and counter- current flow.



SMI IS THE NUMBER 1 IN ITALY IN THE INNOVATION CATEGORY OF THE EUROPEAN BUSINESS AWARDS

On the 22nd and 23rd May 2018, SMI, together with other 288 company finalists from 34 European countries, took part in the finals of the European Business Awards, the biggest and most prestigious European competition for companies. SMI represented Italy in the category "Awards for Innovation" with the project for the new compact stretch-blow moulder

from the EBS K ERGON range, after being chosen by independent judges like "Vincitrice nazionale" from a list of around 3000 companies denominated "Ones to Watch", and who had gone through over 110.000 candidates. Fruit of an innovative project using advanced technological solutions inspired by Industry 4.0 and Internet of Things (IoT), the SMI EBS K ERGON range is formed by ultra-compact, ergonomic

and eco-compatible systems for the stretch-blow moulding of containers in PET up to 3 L. This range of machines offers all the advantages of rotational technology for production requirements from 1.000 to 9.000 bottles/hour. In the ECOBLOC® version, combined with a filler and capper module, the new EBS K ERGON can be used in bottling lines for still water, milk (EV models) and edible oils (EM models).

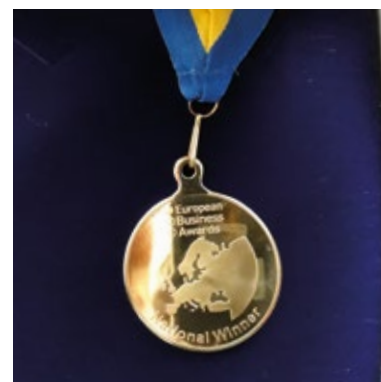


● European
○ Business
○ Awards®

The European Business Awards, that have already reached their 11th year, is today the most important competition for European companies and over 33.000 companies from 34 countries take part. To win an award from such a high number of contestants demonstrates a very high level of excellency. The main aim of the European Business Awards is to support the development of a more solid company community bringing success to Europe.

The Award categories for 2017-2018 are the following:

1. The RSM Entrepreneur of the Year Award
2. The ELITE Award for Growth Strategy of the Year
3. The Award for Innovation
4. The German Trade & Invest Award for International Expansion
5. The Social Responsibility and Environmental Awareness Award
6. The New Business of The Year Award
7. The Workplace and People Development Award
8. The Customer and Market Engagement Award
9. The Digital Technology Award
10. The Business of the Year Award with Turnover € 0 - 25M
11. The Business of the Year Award with Turnover €26M - 150M
12. The Business of the Year Award with Turnover €150M +



SMICENTROAMERICANA

Since 1997, SMI has been present in Mexico through the branch SMI Central America S.A. de C.V., founded with the aim of being able to reply to the numerous requirements of Mexican and Central American customers quickly and efficiently. The expertise, professionalism and availability of the sales and technical staff of 31 people, are the key factors that have brought excellent sales results for the SMI Group in Mexico and countries nearby. Let's discuss this in depth with Alejandro Flores Maldonado, Sales Director of SMI Central America S.A. de C.V.



What are the main reasons that pushed SMI to have a local branch in Mexico?

Traditionally Mexicans are among the biggest global consumers of "soft drinks", this means that Mexico, over the last few years, has always had a high demand market for carbonated drinks and it is in continual growth. Therefore, the local bottling companies need to react rapidly to market demand in terms of products, trends, innovation, volume etc. and they need constant 360° support from bottling and packaging machine and plant suppliers. These aims can be efficiently reached, by a supplier like SMI, only if there is a direct presence on the market that can rapidly provide "next door" technical and sales support to the hundreds of customers who have placed their faith in us.



What are the main requests from the Mexican market?

In Mexico the bottling lines run 24 / 7 therefore, factories need machinery that is highly efficient, with reduced running and maintenance costs. In a market that is extremely variable, the high level of soft drink consumption has determined a high demand in terms of quantity and quality regarding new acquisition trends and new containers and packaging. All these are aspects, which force companies in the "food & beverage" sector to continually switch from one production cycle to another, this can only be managed efficiently with high technology machinery, equipped with solutions for rapid, simple format change-over.

What are the requests of SMI customers, in terms of the performance of bottling and packaging systems and post-sales services?

Today above all, bottling companies need partners, rather than suppliers. Only a reliable partner is able to completely understand all the aspects of a production line: automation, efficiency, performance, costs, profitability, upgrades, assistance, maintenance etc. and at any time our customers can count on SMI Central America which has been in activity for over 20 years. Thanks to a technical team, which was trained in Italy at SMI headquarters, our branch is able to satisfy our customers requirements quickly and efficiently, consultations for new plants and solutions, supply of complete latest generation lines or single machines, technical assistance and spare parts, staff training and upgrades to working machines.

What is your opinion regarding the current market trends?

Today's market is prevailed by the request for bottles and containers that are lighter, eco-friendly, ergonomic, easy and convenient to transport, attractive to look at and that don't cost much to produce. All this is forcing bottling and packaging machine suppliers to develop innovative technical solutions and versatile equipment which guarantee a high level of performance, maximum reliability, reduced running costs and consistent energy savings. Another growing trend regarding the final consumers is the heightened sensitivity towards topics such as being eco-friendly and respecting the environment. Today every big company, starting from Coca-Cola, is working to propose new products that are in line with

the above topics, understanding that this is the only way to keep the market share that over the years, they have earned with difficulty, and to aim to increase. In this "obligated" way companies from the "food & beverage" sector need to be able to count on suppliers of innovative and super-efficient industrial machinery. From this point of view SMI is ahead of time, launching the ERGON range years ago which made energy savings and reduced production costs the two strongholds of which the new project was created and developed. Among the most innovative solutions that have come from this research and innovation we need to remember the new shrink tunnel fuelled by methane gas, that we installed at the Coca-Cola Nogale factory.



➔ THE "PACKAGING" MARKET IN MEXICO

With a population of over 120 million inhabitants and a 2017 Gross Domestic Product growth of 2,1% compared to 2016, for Italian export Mexico represents the biggest South American market for the supply of bottling and packaging machinery. In 2016 around € 150 million was exported, with a growth of 24% compared to the year before and with excellent perspectives for the future. According to previsions analysis carried out by Centro Studi Ucima, over the 2 year period 2017-2019, the market for packaging machinery should have a global growth of around 7% each year.

THE UNIVERSITY INSIDE THE COMPANY

For the growth of every company it is important to establish a strong relationship between every level of school education and the world of work, this aspect is a very important element in the company strategy at SMI, which, for this reason, worked with a group of international students (taking part in a program for a Double Degree organised by the University of Bergamo), to carry out a series of market research on the reference sector. The initiative, patronised by the highest company and university levels, developed over a time length of more than three months, during which the students and the staff at SMI often met to compare the aims and progress of the project. The official presentation of all the results was held on the 19th June 2018 at the University of Bergamo, in the presence of all the companies who had taken part in the various "Double Degree" projects as well as participating teams of students and teachers.



AROUND THE WORLD IN TRADE FAIRS

The first half of 2018 was particularly full of trade fair events for the food and beverage industry. The most recent technological innovations developed by SMI for the companies in this sector really have gone around the world: from Europe to North and South America (with Anuga, Fispal, NPE and ExpoPack), from Africa to the Middle East (with Propack East Africa, Dzagro and



Iran Food+Bev Tec) until as far as Asia with Propack Asia and Drink Japan. In particular, the new range of the ultra-compact rotational stretch-blow moulders from the EBS K ERGON range had great success with visitors at the SMI stand, which at more than one event were on display, fully operational to make containers in PET with innovative and original shapes in front of the visitors.



FOCUS ON CERTIFICATION FOR THE NORTH AMERICAN AND CANADIAN MARKETS

The product certificates UL and CSA® certify that all electrical and electronic appliances are compliant with essential security rules and regulations in force in the USA and Canada. In particular, these certificates are applied to devices for information and telecommunication technology, medical and laboratory devices, industrial controlling components, motors, cables and wiring, lighting devices, machinery to prepare and/or cook food, plastics, appliances for domestic and commercial use. Through the purchase of a special packet, all electrical and electronic components on SMI machines can be supplied with Label Conformity to UL/CSA® standards, giving the product visual proof that it has been tested and certified in accordance to specific regulations.



THE INNOVATION LABORATORY HAS BEEN CREATED



NEW TECHNOLOGY AND NEW TRENDS AT BRAU BEVIALE

The organisers of the 2018 BrauBeviale trade fair, which will be held in Nuremberg from the 13th to 15th November 2018, have prepared a rich programme of events to offer visitors, new ideas and new incentives to face the modern day challenges of the “food & beverage” sector. All beverage producers, whether they produce beer, bottled water, wine or alcoholic or soft drinks, have to face the same questions every day about the future of their activities: “how to become or remain competitive in the future?” SMI is waiting at stand 7A-503 to give existing and potential customers, useful advice and to reflect on the opportunity to grow, for large and small companies, by investing in machines and plants.



The innovation laboratory, SMILAB was created from the synergy between the University of Bergamo and SMI at Point di Dalmine, centre for technological innovation in the province of Bergamo. The Point is an instrument, which is intended to promote the development of the territory, where projects are developed to take advantage of the capacity of the university students, reply to the needs of SMI and lay the foundations for further combined activities, from continuous formation to participating in calls for tender. “The challenges set by Industry 4.0 – declared by Remo Morzenti Pellegrini, Dean of the university during a company visit with Deputy Dean Sergio Cavalieri and the co-ordinators of the four

research groups from the two engineering departments – require more and more advanced know how, and a very high level of competitive innovation capacity. The launch of this laboratory goes precisely in this direction, introducing a new frontier of collaboration between companies and universities”.



BE CONNECTED

Consumers spend more and more time on social networks and this is modifying the way we socialise and also our purchase choices. For companies this means an increased visibility to the eyes of millions of potential customers and an exceptional means to exchange information on preferences, desires and expectations of whoever purchases. Therefore, if you want to always be updated with the latest news

on the “food & beverage” market follow us on social media.





SMI S.p.A. Headquarters

S. Giovanni Bianco (BG), Italy
Tel.: +39 0345 40111
Fax: +39 0345 40209

SMIPACK S.p.A.

S. Giovanni Bianco (BG), Italy
Tel.: +39 0345 40400
Fax: +39 0345 40409

SMITEC S.p.A.

S. Pellegrino Terme (BG), Italy
Tel.: +39 0345 40800
Fax: +39 0345 40809

SMIMEC S.p.A.

S. Giovanni Bianco (BG), Italy
Tel.: +39 0345 40111
Fax: +39 0345 40708

ENOBERG S.r.l.

Telgate (BG), Italy
Tel.: +39 035 845908
Fax: +39 035 4497542

SMILAB S.p.A.

S. Pellegrino Terme (BG), Italy
Tel.: +39 0345 40800
Fax: +39 0345 40895

SMI USA Inc.

Atlanta, GA, United States
Tel.: +1 404 7999929
Fax: +1 404 9946414

SMI Centroamericana S.A. de C.V.

Mexico City, Mexico
Tel.: +52 55 5355 3870
Fax: +52 55 5354 5384

SMI do Brasil Ltda.

São Paulo, Brazil
Tel.: +55 11 36015334
Fax: +55 11 36937603

SMI (UK & Ireland) Ltd

Manchester, United Kingdom
Tel.: +44 161 277 7840
Fax: +44 161 277 7842

OOO SMI Russia

Moscow, Russian Federation
Tel.: +7 495 7206797
Fax: +7 495 7206797

SMI East Europe S.r.l.

Timisoara, Romania
Tel.: +40 256 293932
Fax: +40 256 293932

SMI S.p.A. - Dubai Rep. Office

Dubai, UAE
Tel.: +971-4-8063543
Fax: +971-48160010

SMI Machinery Beijing Co.Ltd

Beijing, People's Republic of China
Tel.: +86 10 6947 9668
Guangzhou, Guangdong,
People's Republic of China
Tel.: +86 20 8439 6460
Fax: +86 20 8439 8391
Nanjing, Jiangsu,
People's Republic of China
Tel.: +86 258 470 4716
Fax: +86 258 470 4776

SMI Asia Services Sdn. Bhd.

Shaah Alam, Selangor, Malaysia
Tel.: +603 5103 5368
Fax: +603 5191 3368

