

AL ETIHAD / TSITSIKAMMA / GASEOSAS LETICIA
BADEM PINARI / CASA DEL AGUA

smi now

Magazine 2019/21



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EDITORIAL 2019/21

Environmental sustainability,
the new challenge of SMI



The continual growth in the consumption of beverages is a global phenomenon, with bottled water leading the sector. As the “case histories” in this number of SMI NOW demonstrate, the growth in consumption of bottled water has caused lots of companies in this sector, to invest in new bottling and packaging technology, with solutions that protect water resources, reduce the environmental impact caused by production processes and safeguard the health and wellbeing of present and future consumers. SMI has a company strategy aimed at sustainable growth and creating shared values; for this, we are continually looking for solutions and innovative products

with less environmental impact: to reduce the weight of packaging (light weighting), promote the use of recycled and recyclable materials, make machines and installations that have low energy consumption etc. Being aware of the strong relationship between safeguarding the environment and the sustainability of customers’ activities, the installations supplied by SMI are equipped with “smart” technology inspired by the world of IoT (Internet of Things) and Industry 4.0, to guarantee greater competition, production efficiency and energy saving, while safeguarding the environment and the planet’s resources.

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

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A TINY PENINSULAR COVERED BY DESERT DUNES AND SURROUNDED BY THE WATERS OF THE PERSIAN GULF, WHERE LIFE CONTINUES UNDER THE SHADE OF THE ANCIENT SOUKS AND FUTURISTIC SKYSCRAPERS. QATAR IS A LAND OF CONTRASTS, WHERE HISTORY AND TRADITIONS LIVE HAND IN HAND WITH INNOVATION. IT'S THE IDEAL PLACE TO RELAX ON LONG, GOLDEN BEACHES, TO GO ON EXCURSIONS IN THE ARID, SANDY AND ROCKY HINTERLAND TO DISCOVER THE THOUSAND-YEAR HISTORY OF THIS MAGICAL LAND, THAT ANTICIPATES THE FUTURE WITH AMAZING SPEED. THE MAIN ENTRANCE TO QATAR IS DOHA, THE CAPITAL, A COSMOPOLITAN CITY WITH 1 MILLION INHABITANTS SQUEEZED BETWEEN THE DUNES OF THE DESERT AND THE WATERS OF THE PERSIAN GULF WHERE IMMEDIATELY, YOU FEEL THE STRONG BOND BETWEEN TRADITION, INNOVATION AND TECHNOLOGY.



AL ETIHAD REFRESHMENT FACTORY

➤ **WATER SECTOR**

AL ETIHAD REFRESHMENT FACTORY
Doha, Qatar

- COMPLETE LINE 20,000 bottles/hour
- integrated ECOBLOC® ERGON 10-36-9 EV
 - case packer LWP 30 ERGON
 - film shrink wrapper LSK 42 F ERGON
 - conveyors
 - sub-supply: high pressure compressor, labeller, inspection systems and coder



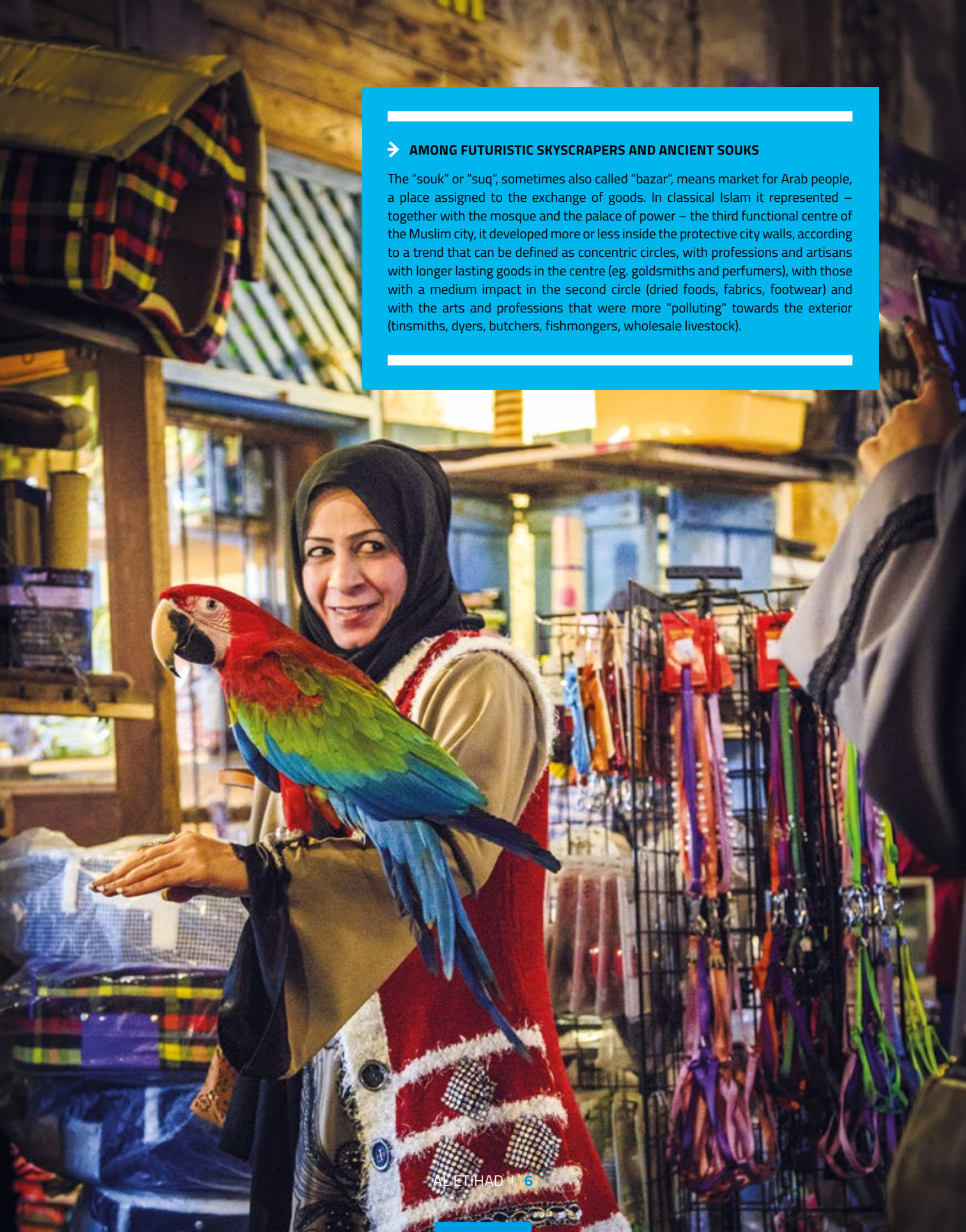
VIDEO



GEO LOCATION

➤ **AMONG FUTURISTIC SKYSCRAPERS AND ANCIENT SOUKS**

The "souk" or "suq", sometimes also called "bazar", means market for Arab people, a place assigned to the exchange of goods. In classical Islam it represented – together with the mosque and the palace of power – the third functional centre of the Muslim city, it developed more or less inside the protective city walls, according to a trend that can be defined as concentric circles, with professions and artisans with longer lasting goods in the centre (eg. goldsmiths and perfumers), with those with a medium impact in the second circle (dried foods, fabrics, footwear) and with the arts and professions that were more "polluting" towards the exterior (tinsmiths, dyers, butchers, fishmongers, wholesale livestock).



THE FUTURE IS NOT ALWAYS PREDICTABLE

In Qatar everything is projected towards the future, above all the companies which, in preparation of growing market demand, continually invest in new technology and in cutting edge production installations. As the future is not always predictable the winning choice is that of concentrating on the customers' current needs without losing sight of future objectives. This is the only way that companies can gain the maximum economic benefits from their activity and optimise resources and investments. One example of success of this development strategy is Al Etihad Refreshment, which, thanks to its collaboration with SMI, has installed a new water bottling and packaging line for the Doha Water brand. This installation, with a current production

of 20,000 bottles/hour, can easily be adapted to double the production without changing the line layout, or replacing the machinery that is currently used.



READY TO INCREASE PRODUCTION! THE LINE WITH EXPANDABLE PRODUCTION

To create the new water bottling and packaging installation for the Doha brand, Al Ethiad Refreshment turned to the experience of SMI, who proposed a bespoke solution for the current production requirements but with a truly innovative aspect, the possibility to quickly and easily adapt to growing future market demands, without compromising their investment.

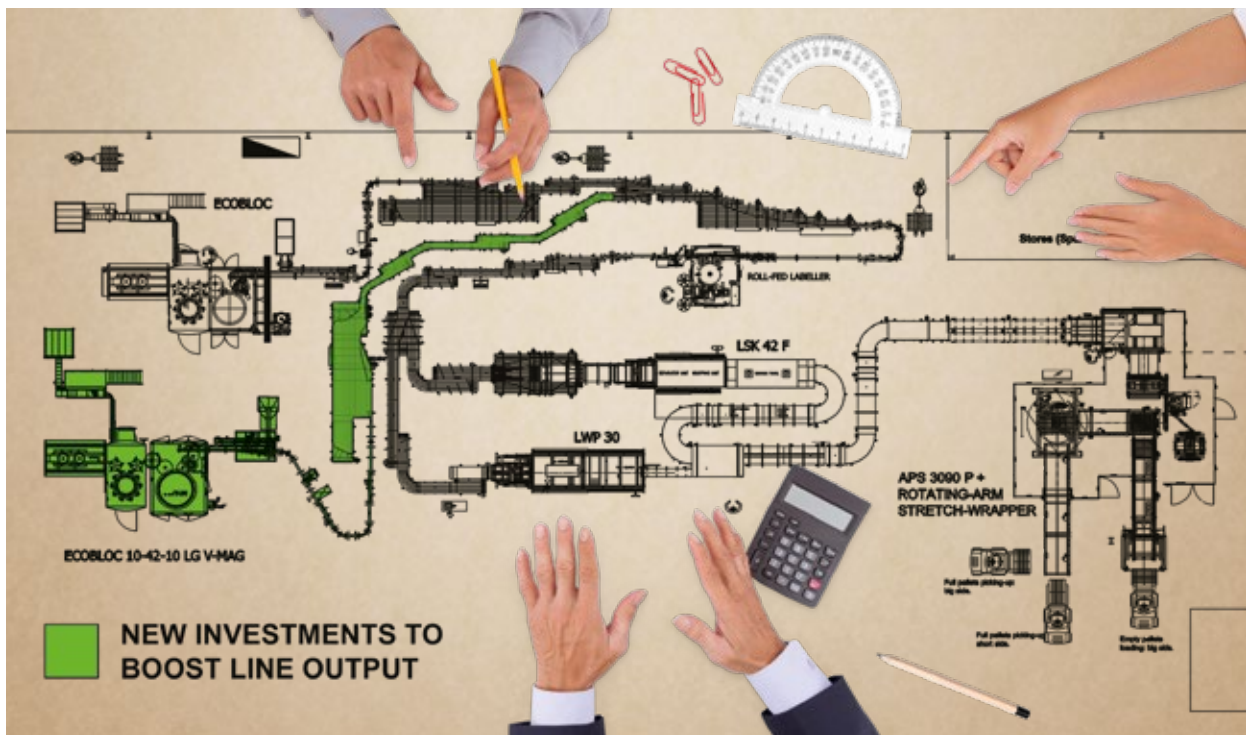
The idea of an expandable production line was devised, a line that right from the start could face an increase in production of up to 40,000 bottles/hour without having to change any machinery in the

installation, which is currently producing 20,000 bottles/hour, because they only need to add a new integrated ECOBLOC® ERGON system to double the installation output in very little time.

The flexibility of the SMI equipment also gives the customer another option, he can decide if he wants to maintain his current production speed of 20,000bph and use the new integrated ECOBLOC® ERGON system to bottle another product or to run new bottle formats.

Even in this case, no modifications to the line are necessary as the conveyors and automatic wrappers from the LSK and

LWP range are so flexible that they will allow the simultaneous management of numerous products and/or formats.



INDUSTRY 4.0 SOLUTIONS THAT INCREASE PRODUCTION PROFITABILITY



In the era of Industry 4.0 machines and installations need to be flexible, intelligent and interconnected. Men, machines and systems communicate constantly among themselves, creating networks of added values and automated production processes that guarantee the optimal use of the resources available. More and more often, companies need to face rapid organisational and production changes to satisfy constant changing market demands, these can be, the type

of product, packaging format, packaging material and so on. To be able to have the availability of more slender, flexible, versatile bottling plants is without a doubt, an important competitive advantage, which allows companies to maintain and gain market share, and to successfully face the most demanding challenges that come from fickle consumer habits. A practical example of this reality can be seen by the "expandable" production line supplied and installed at the Al Ethiad Refreshment Factory.



SMI SOLUTIONS FOR AL ETHIAD FACTORY



The current bottling and packaging line supplied by SMI, was designed and created to satisfy all the principles of Industry 4.0. It has the innovative characteristics of expandability and flexibility in line with the most advanced parameters of the "smart factory", capable of easily adapting to production flows caused by market demand. Ethiad Refreshment can reply efficiently and rapidly to these variations, adjusting its production cycles, with the minimum supplement required by the installation of a new integrated ECOBLOC® to blow, fill and cap, to increase the number the production capacity of Doha natural mineral water or to add a new product or new bottle formats.





➤ INTEGRATED ECOBLOC® ERGON 10-36-9 EV SYSTEM

Functions: stretch-blow moulding, filling and capping of 0.2 L / 0.35 L / 0.5 L / 1.5 L PET bottles of Doha natural mineral water, with a production capacity of up to 20,000 bottles/hour (0.5 L).

Main advantages:

- Compact and flexible solution for stretch-blow moulding, filling and capping PET bottles with mineral water.
- Precise and quick operation, thanks to the electronic operations system, to the motorised stretch rods and the use of high efficiency valves controlled by flowmeters.
- Reduced energy consumption: the stretch-blow moulding module has a dual air recovery system that allows the reduction of energy costs tied to the production of high pressure compressed air.
- High energy efficiency, thanks to the IR lamps fitted on the preform heater module.
- High operational flexibility, making it easy for promotional demands such as applying different colours to the bottles of Doha water.

➤ SHRINK WRAPPER LSK 42 F ERGON

Packed products: 0.2 L / 0.35 L / 0.5 L / 1,5 L PET bottles

Packs worked: the 0.35 L bottles are packed in 4x3 and 5x4 film only, the 0.2 L bottles are packed in 5x4 and 6x4 film only, the 0.5 L bottles are packed in 4x3 film only, while the 1.5 L PET bottles are in 3x2 film only, in twin lane.

Main advantages:

- Extremely flexible shrink wrapper, already geared to double the current production of 20,000 bph in the 0.2 L / 0.35 L / 0.5 L formats so that it can satisfy any future greater market demand.
- Automatic machine suitable for packing various types of rigid containers.
- The packer is fitted with an optional device to work packs in twin lane, film only, offering the customer greater flexibility when packing the current 3x3 bundles of 1.5L bottles and the future 4x3 for 0.35 L and 0.5 L bottles, if there is an increase in production.
- All LSK ERGON models are equipped with a mechanical product grouping system. The version installed at the Al Etihad Refreshment Factory has an automated regulation system for changing format to switch quickly and easily from one format to another.
- The LSK ERGON wrapper has reduced dimensions and represents the most suitable solution to satisfy the needs of customers who don't have much available space.
- Excellent comparison quality/price: despite having cutting edge technology and highly trustworthy components, the LSK ERGON series has highly competitive prices.
- The knife unit is compact and the blade is controlled by a brushless motor with "direct-drive" transmission, making the cutting operation much more precise and facilitating maintenance.

➔ WRAP-AROUND PACKER LWP 30 ERGON

Packed products: 0.2 L / 0.35 L / 0.5 L / 1.5 L PET bottles.

Packs worked: The 0.2 L and 0.5 L bottles are packed in wrap-around corrugated cardboard in 4x6 and 6x8, the 0,5 L bottles in 4x6, the 0.35 L bottles in 5x8, while the 1.5 bottle is packed in 3x4 wrap-around boxes.

Main advantages:

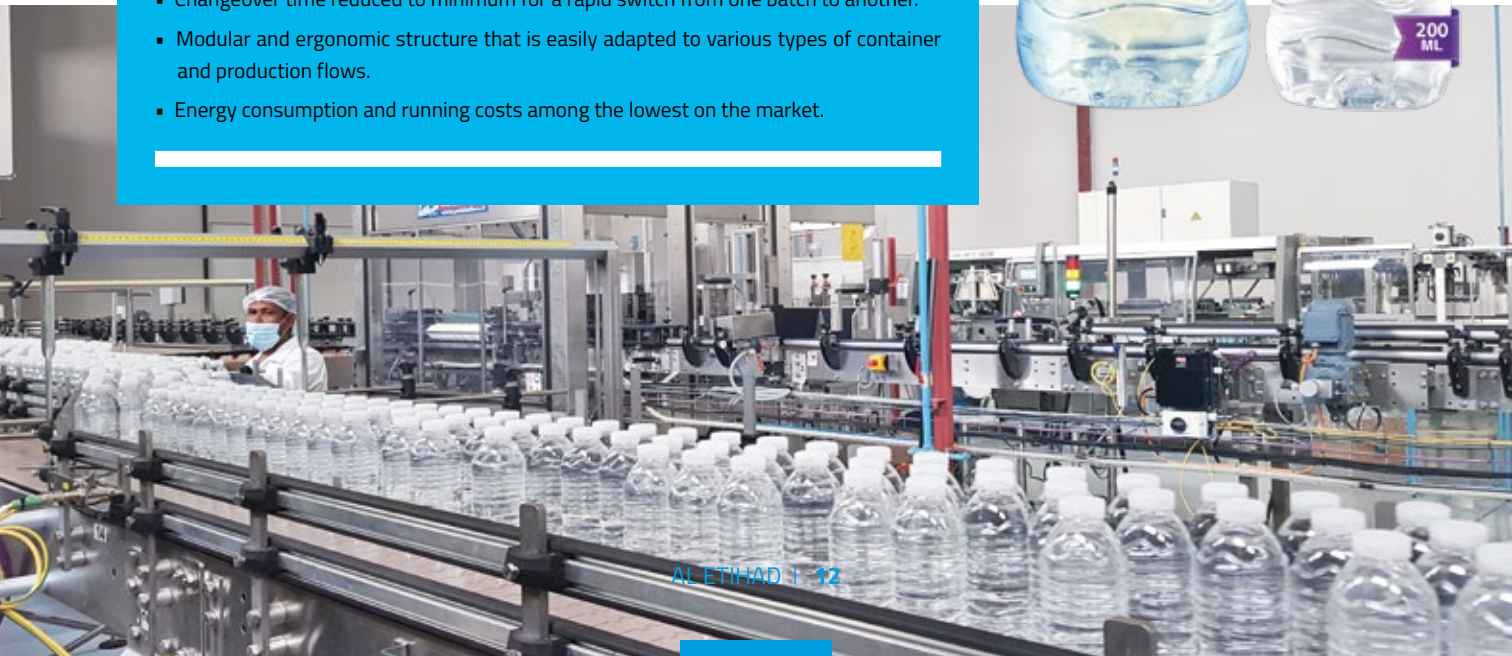
- Packaging process with wrap-around system equipped with a mechanical device which groups the product, with the advantage of forming the cardboard box around the transiting bottles without having to stop the machine.
- Ideal solution for a package that is resistant to impacts and protects the product during transport.
- The LWP ERGON packers are equipped with fixed guides at the machine outfeed which keep the sides of the box pressed together, this system guarantees that the box will keep its perfect long-lasting shape, compared to other pressing systems with rotating chains that are not able to maintain the same level of quality.

➔ CONVEYORS

Function: transporting loose and packed bottles in PET, in particular: transporting the bottles from the outfeed of the integrated ECOBLOC® ERGON system, onto the LSK 42 F ERGON and LWP 30 ERGON packer infeed.

Main advantages:

- The conveyors installed at Al Etihad Refreshment guarantee that the loose and packed PET bottles move smoothly and constantly, without any hitches.
- The use of innovative technical solutions that satisfy the installation's present and future demands. The conveyors have been sized so that in a very short time, they are able to manage greater volumes of production without needing any further modification to the present layout.
- Changeover time reduced to minimum for a rapid switch from one batch to another.
- Modular and ergonomic structure that is easily adapted to various types of container and production flows.
- Energy consumption and running costs among the lowest on the market.



AUTOMATIC MACHINES THAT ADAPT TO CONSUMERS

One of the greatest challenges that is faced in the production of beverages, is that of finding the correct balance between production and flexibility. To reduce costs, a high level of efficiency is needed, together with the best specialised installations. Knowing for certain that consumer demands will change over time, companies in the “food & beverages” sector need vast operation flexibility from their production lines so that they can modify production recipes, and bottle and packaging formats. As flexibility has a cost and meeting new demands means down time on machinery, it is essential to choose machines that right from the start, are designed to reduce minimum down time and to be able to immediately adapt to the new production demands, improving the efficiency of all the plant.



FROM THE LEFT: HECTOR, LINE OPERATOR; PIERRE ANID, GENERAL MANAGER AT NOVADIM; KHALIL MASRI, GENERAL MANAGER AT AL ETIHAD REFRESHMENT AND WASSIM MANSOUR, SALES MANAGER AT NOVADIM.

➤ THE FIRST STADIUM IN THE WORLD THAT CAN BE “DISMANTLED”

Innovation can be seen everywhere in Qatar and now the curtain will be lifted on the first stadium built globally, that can be “dismantled”. The structure is called the Ras Abu Aboud Stadium and will be the feather in the cap at the football world cup to be held in 2022 in Qatar. Made in blocks and removable pieces, the Ras Abu Aboud Stadium can be dismantled at the end of the event, to be later rebuilt in part or completely. With a capacity of up to 40,000 people it will host the matches up to the semi - finals of the World Cup 2022, and will be built on 450 thousand square meters of sea front. Of the eight stadiums, that will be built especially for Qatar 2022, because of how it is built, the Ras Abu Aboud Stadium is the one that will catch the most attention from the mass media and visitors, not only for its module architecture, but also for the sustainability of the project: less impact on the environment, a reduction in the quantity of carbon caused by construction and also the amount of waste products. Revolutionary, daring, pleasant to use and well connected, with lots of aquatic taxis on site, the Ras Abu Aboud Stadium sums up in a few but significant characteristics, the intentions of the organizers of Qatar 2022.



QATAR : “SMART CITIES” WITH SUSTAINABLE DEVELOPMENT

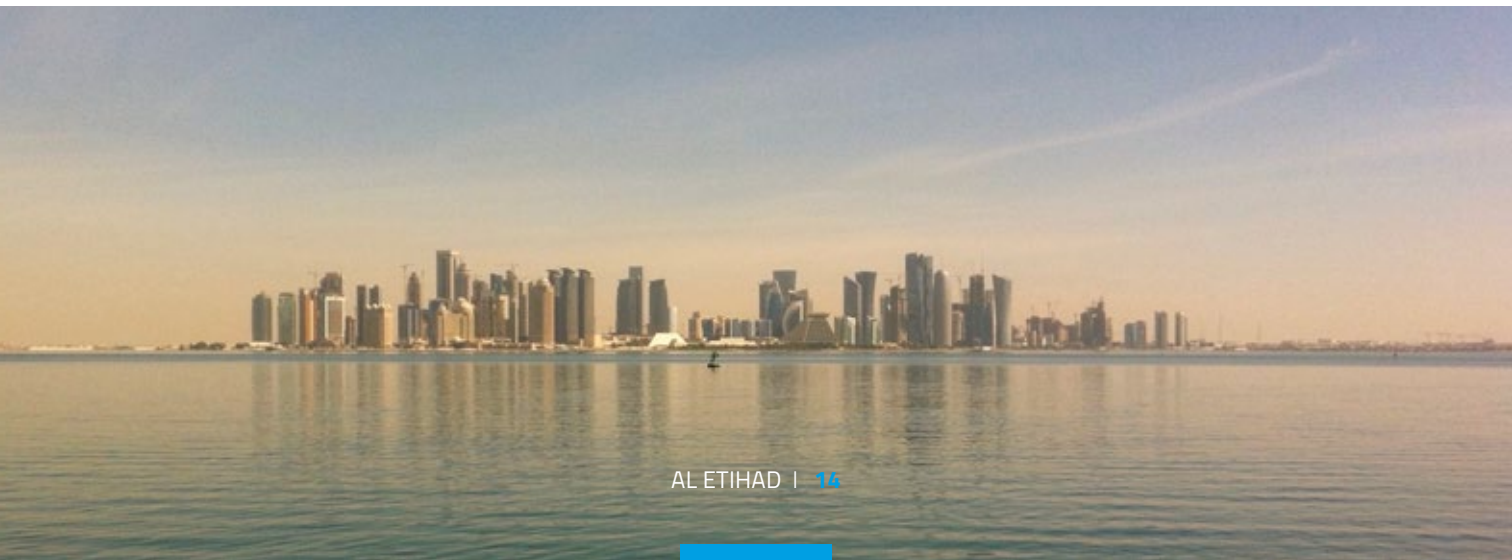
As yet unknown as a tourist resort, Qatar is emerging with its growing commitment towards environmental safeguard and eco-sustainable development. Apart from it being fascinatingly modern, it is causing interest for its commitment towards the protection of the environment, of the biodiversity and of the ozonosphere. In Doha, the capital, a skyline of skyscrapers and ultra-modern buildings can be admired among the most traditional suuks. A great deal of money has been invested in the city centre for the “Msheireb”, the first urban renovation project with an eco-friendly point of view, which respects the traditional historical and cultural heritage of the emirate, bringing the oldest part of the city back to life, thanks to the use of the most innovative criteria of bio-construction and sustainable development. Qatar has also adopted a plan of action to promote the development of renewable energy through significant investing in photovoltaics (PV). The qualities of this national plan are those of saving the desert’s eco-system and to favour the regeneration of cities from a “green” point of view. An excellent example of this sustainable development strategy can be seen at Lusail City, the most eco-sustainable “smart” city, that 15 Km from Doha, envisages useful expedients to reduce environmental impact caused by humans, starting from the

➤ A LEAP INTO NATURAL WONDERS

Just outside Doha there are numerous places to discover the country’s nature and traditions. The desert is the greatest protagonist for trips and excursions, first and foremost is “Khor Al Adaid” (which means “inland sea”), one of Qatar’s most spectacular wonders of nature. Situated about 60 km from the capital, it is one of the few places in the world where the sea encroaches deep into the heart of the desert, creating a natural reserve with its own eco-system. The area is home to unique examples of fauna, including some species which are internationally rare, and/or risking extinction, such as turtles. For its remarkable landscape, Khor Al Adaid is protected by UNESCO. Other experiences to try in the desert, a safari by Jeep through the sand dunes or a night excursion to admire the magnificent sunsets in the total silence of this immense place.



drastic reduction of squandering water. This futuristic city has great expectations and all eyes will be focused on Qatar, especially in 2022, when the Arab emirate hosts the football world cup.



DOHA WATER IN PREPARATION FOR THE FIFA WORLD CUP 2022



In Qatar, where everything is possible and where water under the brand Doha Water, bottled and packed thanks to the new production line supplied by SMI, aspires to become a product of success in view of the 2022 World Cup, which, for the first time in history, will be held in this country. In view of this very important world event, the El Ethiad Refreshment Factory decided to be prepared and invested in a modern bottling line capable of 20,000 bottles/hour, expandable to 40,000. Challenges are a part of the nature of this company, which over the years, has understood how to reap market opportunities and consequently, increase their market share. The Al Ethiad Refreshment Factory is relatively new to the production and bottling of mineral water and was devised from a pre-existing company called Al Rashid Ice Water

Factory, specialized in the production and supply of ice in food and industrial sectors. All this came from an idea thought up by the owner of Al Rashid Ice Water Factory, the surgeon Dr. Khalid Al Rumaihi, who wanted to start up a collateral business activity and decided to become part of the "business" created by selling bottled water. At the beginning, production was carried out in a second-hand plant, producing 0.33 L, 0.6 L and 1.5 L bottles under the brands Al Saaqee Water and Doha Water, which were packed by an SMI packer from the WP series. Experience gained in the bottled water sector and the growing demand for their products, created the presupposition for this company's most recent challenge, which involved SMI for the supply of a complete new line for bottling and packing water under the brand Doha Water.



AN IMAGINARY LANDSCAPE, A MAGICAL, SPELLBINDING PLACE, THAT HAS INSPIRED LEGENDS OF MERMAIDS THAT LIVE WITH DOLPHINS, OTTERS AND WHALES! BUT IF THE MERMAIDS ARE A LEGEND, THE MAGICAL BEAUTY OF THE ENVIRONMENT IS A BREATHTAKING CERTAINTY; THE CERTAINTY OF BEING IN THE TSITSIKAMMA NATURE RESERVE, A LONG, NARROW AREA THAT STRETCHES FOR 75 KM ALONG THE COAST OF THE EASTERN CAPE, IN SOUTH AFRICA. IN THIS WONDERFUL LANDSCAPE, WHERE PURE, TRANSPARENT WATER FLOWS, STARTING IN 1997, ENTREPRENEUR JUDY WOODGATE HAS BOTTLED SPRING WATER IN A MODERN INSTALLATION SOLD UNDER THE BRAND TSITSIKAMMA CRYSTAL SPRING WATER. TODAY THIS SOUTH AFRICAN COMPANY, WHICH HAS ITS HEAD OFFICE IN THE TOWN OF WITELSBOS (150 KM WEST OF PORT ELISABETH), IS ONE OF THE MAIN LOCAL REALITIES IN THE SECTOR OF BOTTLED BEVERAGES AND TO SATISFY THE GROWING DEMAND FOR SPRING WATER IT RECENTLY INSTALLED A NEW INTEGRATED SYSTEM ECOBLOC® ERGON FOR BLOWING, FILLING AND CAPPING OF 5L CONTAINERS, SUPPLIED BY SMI.

➤ **WATER SECTOR**

TSITSIKAMMA CRYSTAL SPRING WATER

Witelsbos, South Africa

www.tsitsikammacrystal.co.za

➤ Integrated system ECOBLOC® ERGON 4-12-4 HC EV



VIDEO



GEO LOCATION

TSITSIKAMMA

CRYSTAL SPRING WATER

LIVING IN SOUTH AFRICA IS A SURPRISE

It is the surprise given by nature. The surprise that is discovered when you reach the entrance of the Tsitsikamma National Park, the green lung of the South African coasts, home to the ancient "Khoisan" population who called this spellbinding place "Sietsiekamma"; in Khoisan the name of the park means "place of much water", thanks to which the whole region is proudly dominated by nature. It is a protected mountainous area inhabited only by Mother Nature and therefore devoid of any risk of external pollution, which rises in the heart of the park near the water springs. It is here you can find the installation of Tsitsikamma Crystal Spring Water, which since 1997, has bottled the pure uncontaminated waters that flow from the quartzite internal layers of the park's mountains. The water is filtered naturally as it seeps through the various layers of rock, thanks to which it reaches a delicate balance of minerals which give it its unique sweet taste. Over the years Tsitsikamma Crystal Spring Water has diversified its range of products bottling still, carbonated and flavoured water; furthermore, thanks to the use of bespoke, latest generation installations such as the integrated system from the ECOBLOC® ERGON range by SMI, the company also produces the PET bottles which it fills, bottles and caps.

➤ THE GARDEN ROUTE

The name is enough to evoke images of green landscapes and idyllic views. This famous panoramic road, one of the most appealing in Southern Africa, runs along the southern coast of South Africa and winds for around 750km from Cape Town to Port Elizabeth, through a region with a mild climate, similar to that of the Mediterranean. It is one of the most popular attractions in South Africa and is part of a beautiful section of coastline whose main destinations are made up of magnificent beaches, indigenous forests and appealing surroundings, such as the city of Oudtshoorn, the "global capital of the ostrich", due to the large presence of this animal, or the town of Knysna, famous for the breeding of the most precious ostriches in South Africa. The bottling plant Tsitsikamma Spring Water, is situated between Plettenberg Bay and Jeffreys Bay, just before Port Elizabeth.





SINCE 1997, TSITSIKAMMA CRYSTAL SPRING WATER HAVE DONATED A CONTRIBUTION FROM EVERY BOTTLE SOLD TO THE DOLPHIN ACTION & PROTECTION GROUP (DAPG), A NO-PROFIT ORGANISATION INVOLVED IN PROTECTING DOLPHINS AND ALSO IN THE "SAVE THE WHALES" CAMPAIGN. THANKS TO THE EXCELLENT WORK OF DAPG WITH ITS SAVEGUARDING CAMPAIGNS AND THROUGH CURRENT LEGISLATION, THE RISK OF THESE WONDERFUL CREATURES BECOMING EXTINCT HAS BEEN REDUCED, COMPARED TO BEFORE 1977 WHEN IT WAS FOUNDED. THE PASSION AND COMMITMENT OF TSITSIKAMMA SPRING WATER TO PROTECT THE ENVIRONMENT CAN ALSO BE SEEN THROUGH ITS INITIATIVES TO SAVE THE RHINOS THAT, DUE TO POACHING, RISK EXTINCTION. THE COMPANY DONATES A CONTRIBUTION FROM EVERY BOTTLE SOLD TO GREATER KRUGER ENVIRONMENTAL PROTECTION, WHICH IS COMMITTED TO PROTECTING THIS SPECIES.





THE ARTISTIC ASPECT OF THE BOTTLE

TO BOTTLE THEIR BRANDED NATURAL MINERAL WATER, TSITSIKAMMA CRYSTAL SPRING WATER USE BOTTLES WITH A SINUOUS DESIGN AND LONG LIFE, DESIGNED TO FACILITATE GRIP AND TRANSPORT. STARTING FROM A PROJECT OF BOTTLES ALREADY IN USE, THE SOUTH AFRICAN COMPANY ASKED SMI TO STUDY A LIGHTER, MORE ECO-SUSTAINABLE, 5L CONTAINER. KEEPING THE THE LOOK ALMOST UNCHANGED, THE SMI DESIGNERS "SLIMMED DOWN" ("DOWNSIZING") THE BOTTLE TO CREATE A LIGHTER CONTAINER DROPPING FROM A TOTAL WEIGHT OF 96.5G TO 72G, THEY ALSO ADDED SOME EXPEDIENTS THAT WILL SOON ALLOW IT TO BE REDUCED FURTHER TO 64G. COMPARED TO THE ORIGINAL VERSION, THE NECK HAS ALSO BEEN MODIFIED DROPPING FROM 48 TO 38MM AND ALSO WITHOUT CHANGING THE ORIGINAL SHAPE, THE BASE, THE SHOULDERS AND THE DECORATION.



BOTTLES TO PROTECT AND STORE

Product quality is an essential element for the success of Tsitsikamma Crystal Spring Water, therefore, the use of containers that protect and store the purity of the bottled water is a fundamental requirement of their activity. To bottle, store and market the water from their springs, the South African company uses bottles in PET (Polyethylene Terephthalate), a widely used thermoplastic resin for the production of containers suitable for food contact. PET is rigorously tested according to guide lines from the "Food and Drug Administration (FDA)", the American governing body that controls food and pharmaceutical regulations. Thanks to its particular molecular structure PET resists knocks, is unbreakable and safe during the life cycle of the container: this guarantees safety during production, storage, transport and consumer use. PET is also 100% recyclable. The Tsitsikamma Crystal Spring Water company does not use Bisphenol A (BPA) to produce its bottles in PET or as a chemical component in any of the materials used to produce PET; Bisphenol A, used to produce polycarbonate (a different plastic to PET), is as a matter of fact a damaging chemical compound.





From the spring to the bottled product; from distribution to the sales outlet, to the consumer: the whole production undergoes sophisticated analysis and severe controls to guarantee the constant purity of the water. Quality control tests are carried out on site, "off-site" monitoring and external "auditing" by a third party are the norm at this South African installation to ensure the highest levels of quality. Quality without compromise that is obtained, apart from through strict and continuous controls, but also by using

latest generation technology such as the SMI ECOBLOC® integrated system for blowing, filling and capping, which uses a series of technical innovations applied to the process for producing containers in PET. The motorised stretch rods guarantee that the stretch rod cycle is precise and that the position is controlled accurately, as well as being remarkably energy saving, while the use of high performance, low deadvolume valves, reduces the length of time for pre-blowing and blowing, all this to the advantage of the machine's output and the quality of the bottles produced.





➤ THE VIRTUES OF WATER

- Water is the most vital part of our diet and without a doubt the healthiest beverage.
- The water produced by Tsitsikamma Crystal Spring Water helps to prevent obesity because it contains no additives and has zero calories.
- Drinking water maintains hydration therefore also concentration and attention.
- The human body is mainly constituted of water (the brain 75%; blood 82%; lungs 90% and liver 96%).
- Water fights fatigue and facilitates physical resistance.
- Water helps digestion and is vital for carrying oxygen and nutrition to cells.
- Water helps to eliminate toxins and waste products.
- Water regulates body temperature, lubricates and cushions joints as well as protecting organs and tissue from shocks.
- Water should be the first and last drink of the day.



FROM LEFT:

JOHN FAUL, DIRECTOR OF THE TSITSIKAMMA WATER PLANT;
DOUG WOODGATE, OWNER OF TSITSIKAMMA WATER;
CALVIN CHRISTY, OWNER OF CALECH AGENCIES;
ELEONORA SCOTTI, SMI SALES OFFICE; EDDIE WILLIAMS AND
SHAUN LAPPIN, TECHNICIANS FROM CALTECH AGENCIES.



SMI SOLUTIONS FOR TSITSIKAMMA



To satisfy market demand for water bottled in large containers (5 litres), the company invested in a new integrated system from the ECOBLOC® ERGON HC EV range supplied by SMI, the ideal solution to produce, fill and cap high capacity containers in PET, in shapes that vary from the most simple to the most innovative and complex.





➔ INTEGRATED SYSTEM ECOBLOC® ERGON 4-12-4 HC EV

Functions: stretch- blow moulding, filling and capping 5L PET containers with natural mineral water, having a production capacity of up to 4,000 bottles/hour.

Main advantages:

- A compact and flexible solution for stretch- blow moulding, filling and capping bottles in PET.
- Integrating stretch-blow moulding, filling and capping in a single machine offering remarkable economic advantages as it does not require a rinser nor conveyors between blower and filler and accumulation.
- Precision and fast functionality thanks to electronic operational control, motorised stretch rods, and the use of high efficiency valves controlled by flowmeters.
- Reduced energy consumption: the stretch-blow moulding module is equipped with a counter pressure air system that reduces energy costs caused by producing high pressure compressed air.
- High energy efficiency, thanks to the IR lamps mounted on the preform heating module.
- Reduced costs for maintenance and installation management.



BATHED IN NATURE: THE GREEN LUNG OF THE TSITSIKAMMA NATIONAL PARK

Stretches of land that slope gently towards the sea. Deserted beaches whose only inhabitants are some species of birds. No noise except that of nature. This is the Tsitsikamma National Park, a unique spectacular landscape, created by the movement of the water of both rivers and sea. The Tsitsikamma National Park is an important tourist attraction in South Africa, for those that follow the National Park Garden Route it is an ideal place to see whales, dolphins, otters, antelopes and a number of species of birds. Inaugurated in 1964, to protect the coastal forest and the marine environment in the southern part of South Africa, the Tsitsikamma National Park winds along the rocky coast of the Eastern Cape for around 80km and extends over an area of 65.000 hectares slightly east of the Bay of Plettenberg. Water is the main element of the Tsitsikamma (a khoe-san word that means "a lot of water"), where 1200mm of rain falls yearly. The area is covered by vast areas of indigenous forest with 116 kinds of majestic trees; the vegetation is characterised by gigantic Outeniqua Yellowwood trees (the Big Tree), more than 800 years old, that with their height of 50 metres, tower above the *Ocotea bullata* (stinkwood), *Olea Capensis* (ironwood) and the gigantic fern trees. When the forest is left behind, the vegetation changes and the land is covered with "fynbos", the typical flora of the Eastern Cape. As to the fauna, the forest is home to thousands of wild birds and animals which are hard to catch sight of: the wild pig, the leopard and the genet, for example, which only come out at night, while the Knysna is a true master of disguise.

➤ ONE PARK NUMEROUS ACTIVITIES

The Park offers lots of outdoor activities and following paths immersed in nature and white knuckle activities like the "canopy tour" or "bungee jumping", you discover authentic, uncontaminated nature. All the itineraries have spectacular views of the blue of the sea that meets the green of the mountains. For those in a hurry, the "Mouth Trail" is certainly the most indicated: it is only a kilometre inside the park, walking along a wooden gangway, that goes through luxurious forest you can see lots of different species of wild birds and animals or watch whales and dolphins, and which takes you to the Storms River Bridge, the most spectacular place in the park, a suspended bridge 77 metres long and 7 metres wide, that overlooks the mouth of the river Storms. Among the most famous trails is the "Otter Trail" (that takes its name from a particular species of otter which can be found in Cape Town) 42 km long, or the "Waterfall Trail", 3 km long, that, after a demanding start along the coast, leads to a clear mirror of water dominated by a 50 metre high waterfall.





THE MARKET FOR BOTTLED WATER IN SOUTH AFRICA



Recent data released by the European Federation of Bottled Water (EFBW) shows a global market growth at a much faster speed compared to the soft drinks market. This trend is predicted to last until at least 2022 and, therefore, it is right to expect that even in South Africa, the bottling industry is destined to grow, even if the sector has only been developed recently and has fewer consumers compared to those registered in more consolidated markets. In fact, the population of around 56 million South Africans drink 2.5 litres of mineral water per head annually, compared for example, to the 60 million Italians who consume 147 litres per head. The decision taken by Tsitsikamma Crystal Spring Water to invest in the purchase of a new blowing,

filling and capping system supplied by SMI sprang from the necessity to intercept the trend in market growth and be ready to satisfy the greater request for bottled water. Currently in South Africa, the bottled water sector is made up of a few, large producers that have automated plants, and by a greater number of small bottlers, where production envisages manual operations beside the use of automatic or semi-automatic machinery. There are around 100 companies in the sector, which produce over 270 million litres per year, with stable growth predicted, thanks to more consumer attention towards a healthier lifestyle and to a more frequent choice to quench thirst with natural water instead of carbonated drinks. In South Africa the quality of bottled water is protected and controlled

by several regulations, which are vigilated by important organizations like SANBWA (South African National Bottled Water Association).





FLAVOURED WATER FOR EVERY TASTE

APART FROM PRODUCING NATURAL MINERAL WATER THE SOUTH AFRICAN COMPANY TSITSIKAMMA CRYSTAL SPRING WATER, ALSO OFFERS A WIDE RANGE OF FLAVOURED WATER, WHICH REPRESENT A HEALTHIER ALTERNATIVE TO SODA BEVERAGES WHICH ARE CHARACTERISED BY THEIR HIGH CONTENT OF SUGAR AND CAFFINE. THE MARKET LAUNCH OF THIS NEW LINE OF PRODUCTS CAME AFTER MANY YEARS OF COMPANY RESEARCH, DURING WHICH, TSITSIKAMMA CRYSTAL SPRING WATER WORKED WITH THE BEST EXPERTS OF THE SECTOR, WHO CARRIED OUT COUNTLESS TASTING TESTS UNTIL THEY REACHED A COMBINATION OF TASTES AND FLAVOURS, ABLE TO SEDUCE THE PALATE OF A WIDE RANGE OF CONSUMERS. AND THIS IS WHAT HAPPENED, BECAUSE NOW CONSUMERS IN SOUTH AFRICA CAN BUY A WIDE RANGE OF FLAVOURED BEVERAGES WITHIN THE TSITSIKAMMA BRAND WITHOUT LOSING THE HEALTHY PROPERTIES OF SPRING WATER.





GASEOSAS LETICIA

THERE IS A PLACE IN AMAZONIA, WHERE THREE COUNTRIES MEET (COLOMBIA, BRAZIL AND PERU) AND YOU REALISE THAT AMAZONIA DOESN'T BELONG TO A SPECIFIC COUNTRY, BUT ONLY AND EXCLUSIVELY TO ITSELF. WE ARE IN THE CITY OF LETICIA, THE MOST SOUTHERN IN COLOMBIA, IN THE AREA OF "TRES FRONTERAS", IN THE CENTRE OF A THICK FOREST, SURROUNDED BY THE UNDISPUTED FORCE OF LUXURIOUS NATURE AND WHERE THE INTENSE GREEN OF THE JUNGLE, POPULATED BY SLOTHS, PARROTS, MONKEYS AND MANY OTHER SPECIES OF ANIMALS, IS INTERRUPTED FOR A BRIEF SPELL TO GIVE HOME TO GASEOSAS LETICIA S.A, THE SMALLEST BOTTLING PLANT WITHIN THE THE COCA-COLA COMPANY CIRCUIT. IT IS A BOTTLING PLANT WITH GREAT STRATEGIC IMPORTANCE FOR AMAZONIA, IN THE HEART OF THE JUNGLE, IT GENERATES WORK FOR OVER 500 PEOPLE DIRECTLY AND INDIRECTLY AND IN THE LAST FIVE YEARS, HAS SEEN AN ANNUAL GROWTH OF BETWEEN 8% AND 11%. THIS COLOMBIAN COMPANY, WHICH, CURRENTLY HAS FOUR BOTTLING LINES, DECIDED TO AUTOMATE THE PRODUCTION OF COCA-COLA BOTTLES IN PET AND THEREFORE, INSTALLED A NEW ULTRA-COMPACT ROTARY STRETCH-BLOW MOULDER FROM THE SMI EBS K ERGON RANGE.



➤ **SOFT DRINKS SECTOR**

GASEOSAS LETICIA S.A.
Leticia, Amazonas, Colombia
gaseosasleticia.com.co

➤ Rotary stretch blow-moulder EBS 4 K ERGON



VIDEO



GEO LOCATION

THE “LITTLE ONE” PART OF THE “GIANT”

Gaseosas Leticia S.A is the smallest bottling plant in the world within the American company The Coca-Cola Company and it satisfies the requests of Amazonia and the confining areas of Brazil and Peru, for soft drinks. “Gaseosas Leticia – as confirmed by the company CEO Mr. Hauptman Puentes -began its activity 50 years ago with just six employees and a small production of 25 cans of soft drinks per day (around 625 cans per month), while today they sell 2.000 per day (50.000 cans per month). Over the years, the company has evolved constantly, and if we consider the last five years, the annual growth has fluctuated between 8% and 11%.”Being part of the Coca-Cola group has certainly given Gaseosas Leticia added value, but there are other factors which are just as important that have allowed this Colombian company to gain a leading position in the region; the latest generation technology within the production

department and the talent of the employees and collaborators.



EXPLORING AMAZONIA

You can start exploring Amazonia by going on a night trek in the Omagua Natural Reserve, here you will find lots of insects and animals that you have never seen before: some spiders are tiny, others gigantic, there are also poison frogs, toads and tarantulas. Everywhere, there is a magical silence, only the sounds of nature which are sometimes disturbing, and when the torch lights go out, it is like being in an enchanted kingdom looking at fluorescent mushrooms. The more daring, can spend the night in a treetop house in the middle of the forest. You mustn't miss sailing along the River Amazon to reach the village of Puerto Nariño, where you can see pink dolphins, whilst the most courageous can go for a swim among piraña in Lake Tarapoto. The unique sunsets reflect on the water, creating a magical atmosphere enriched by the presence of the Ticuna, a local population who still practice evocative local traditions. It is from the natives that you learn to love Amazonia, seeing love, the lack of egoism and respect for nature reflected in their eyes.



LETICIA, WHERE THE COUNTRIES HAVE NO BORDERS

Very few people know that travelling through Amazonia, is like travelling through three different countries. The city of Leticia, home to the Coca-Cola plant, is just a few kilometres from the borders of Peru and Brazil, where the three countries seem to melt into one (area of the Tres Fronteras). It only takes a few minutes to sail along the Amazon to go from one country to another, and to hear Spanish spoken in the Colombian or Peruvian villages or Portuguese in those in Brazil. Amazonia is a true mosaic of populations, home to many indigenous communities, with only nineteen tribes known such as

the Ticuna, the Huitotos and the Yucun, who preserve a rich anthropological patrimony. Leticia a busy commercial port, founded in 1867, starting point for a lot of excursions, for the most part by river, and the most important residential area in the region as well as being the administrative centre of Amazonia. Despite the stifling heat, the humidity and ferocious mosquitoes, Leticia is a delightful launching pad from where to begin exploring the magical forest of Amazonia: from the island of Sofia, known as "isla de los micos", for the quantity of monkeys, to Puerto Nariño, a small town inhabited by the Ticuna and Yagua natives; from Lake

Tarapoto, natural habitat of dolphins, to the Amacayacu Natural Park, a natural reserve that is home to a rich variety of flora and fauna.



THE LUNG OF THE EARTH

The Amazonia forest, considered to be the lung of the Earth, covers an area of around 5.5 million square kilometres in Brazil, Peru, Colombia, Venezuela, Ecuador, Bolivia, Guyana, Suriname and French Guiana. It is home to one of the most flourishing ecosystems in the world, fed by the enormous section of water from the river Amazon, so majestic that sometimes it resembles a sea, and from the more than ten thousand tributaries, that over their paths create hundreds of islands. This gigantic river starts in Peru and after flowing for 6937 km, it bursts into the Atlantic Ocean. For its length it is second only to the Nile, but its hydrographic basin is the most widespread in the world, and even today, it is the main transport route in the region. The Amazonia forest is the largest rainforest on the planet, it is very precious for life thanks to the amount of oxygen that it produces, and has a rich patrimony of biodiversity. It is thought that 2.5 million species of insects, 3000 species of fish, 1294 of birds, 427 species of mammals and 378 of reptiles live in the region. As for the plantlife, there are 60,000 species of classified plants. Amazonia is certainly a fascinating destination to whoever is looking for extreme contact with nature and having an experience



in an unknown mystical dimension. The incredible landscapes that can be seen while sailing along the Amazon, the amazing leaps by the beautiful, rare, pink dolphins from Lake Tarapoto and the disturbing staring eyes coming from the monkeys hidden in the centuries old treetops, stir emotions that can't be rivalled.





➔ **ALONG THE RIVER AMAZON**

Sailing along the river Amazon you reach the Natural Reserve of Marasha, where you can observe a wide variety of flora and fauna and come into contact with the local population who live in harmony with the land and nature. Continuing along the river you reach the Amacayacu National Park, one of the 49 natural reserves in Colombia, where you can see spectacular plants, like the enormous ceiba trees or the round floating leaves of the giant *Victoria Amazonica* water lily which are so thick that they can hold the weight of a child. Around eighty kilometres from Leticia there is a small community called Nariño, sensitive to ecology and respectful of the fragile Amazonian ecosystem.



COLOMBIA ES PASIÓN

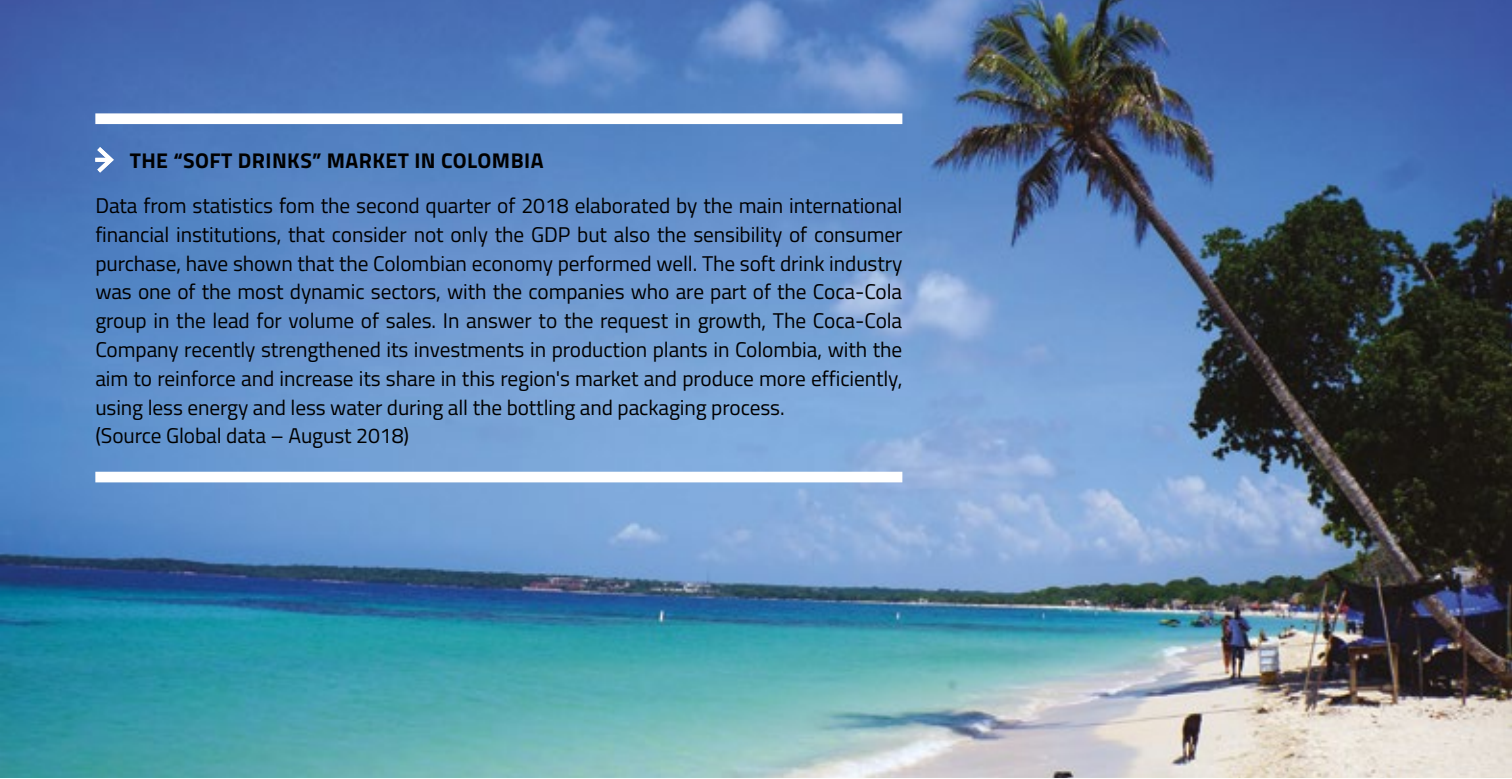
Colombia strikes you with its multiple aspects of nature and landscape and because there is a little of everything: sea, mountain, forest, desert, history, museums... "Colombia es pasión" is the slogan used to promote this country, which is little known to tourists, even though it is unique. A trip to Colombia means venturing in the heart of the Amazon, to discover the greatest and most unique biosphere on the planet. Around one third of Colombia is within the Amazonia forest, the enormous area of around 400 thousand square

kilometres of rain forest vegetation that surrounds the basin of the river Amazon, the "lung of the Earth", precious for the life of our planet thanks to the amount of oxygen produced and because it is the main green area with its rich patrimony of biodiversity.



➔ **THE “SOFT DRINKS” MARKET IN COLOMBIA**

Data from statistics from the second quarter of 2018 elaborated by the main international financial institutions, that consider not only the GDP but also the sensibility of consumer purchase, have shown that the Colombian economy performed well. The soft drink industry was one of the most dynamic sectors, with the companies who are part of the Coca-Cola group in the lead for volume of sales. In answer to the request in growth, The Coca-Cola Company recently strengthened its investments in production plants in Colombia, with the aim to reinforce and increase its share in this region's market and produce more efficiently, using less energy and less water during all the bottling and packaging process. (Source Global data – August 2018)



SMI SOLUTIONS FOR GASEOSAS LETICIA



The Gaseosas Leticia S.A. plant is situated in a strategic point, from where it is possible to distribute the production of its soft drinks all over the Colombian Amazonia. Thanks to investments in new technology, like the new SMI compact rotary stretch-blow moulder from the EBS K ERGON range, the expansion of this company is destined to last for many years. Through this latest investment, Gaseosas Leticia aims to widen its production capacity by bottling soft drinks

under the Coca-Cola brand, in 0,5 L and 2 L bottles in PET. The Gaseosas Leticia S.A. plant is situated in the centre of the town bearing the same name, within an industrial area of around 5.000 square metres, where the administration, sales and production teams work, not only in the production of the soft drinks for the Coca-Cola brand, but this Colombian company also produces beverages such as flavoured water, carbonated water, fruit juices with guarana, grapes, oranges, citrus, lemons, etc.

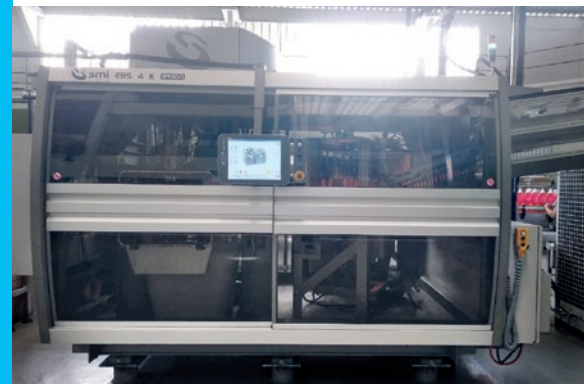


➔ ROTARY STRETCH-BLOW MOULDER EBS 4 K ERGON

Functions: stretch-blow moulding 0,5 L and 2 L bottles in PET, with a maximum speed of 8.800 bph (0,5 L containers).

Main advantages:

- The EBS K ERGON range is the result of an innovative project that uses advanced technological solutions inspired by the principles of 4.0 and the Internet of Things (IoT) to satisfy requests in terms of productivity, operation flexibility, energy savings, simple management and monitoring of the entire bottling line.
- The high efficiency rotary stretch-blowing system, equipped with motorised stretch rods (commonly used for high speed production) controlled by electronic movements that do not need mechanical cams. This solution guarantees the precise cycle of the stretch rods, significant energy savings, fewer mechanical interventions and remarkable advantages compared to linear blowers.
- Ultra-compact structure with reduced size: the K derives from the German word "kompakt", to highlight how compact the machine module is, which, in one single structure groups the section that heats the preforms with the one which stretch-blows.
- Completely electronic production process, with brushless motor transmission equipped with integrated servo driver.
- Reduced blower energy consumption, thanks to the preform heating module, equipped with high energy efficiency IR lamps, and to the stretch-blowing module equipped with dual air recovery system that allows the reduction of energy costs tied to the production of high pressure compressed air.
- High level production: the stretch-blowing system has the advantage of high performance valves with low deadvolume, which reduce the length of time for pre-blowing and blowing, ensuring greater machine output and a higher quality of bottles produced.
- Machine geared to be placed in the ECOBLOC® version together with a filler and a capper.



"WHEN THE TREE FELL, IT SPREAD ITS SEEDS..."

"AT THE BEGINNING I THOUGHT I WAS FIGHTING TO SAVE THE RUBBER TREES, THEN I BELIEVED I WAS FIGHTING TO SAVE AMAZONIA. NOW I UNDERSTAND THAT I AM FIGHTING FOR HUMANITY."

- CHICO MENDES -

Amazonia, a huge forest, that couldn't have more than it has, is the lung which is necessary for humanity, an enormous commercial value for investors, for the owners of the "fazendas" (farms) who would do anything for profit. At the first warning that the forest was being attacked, the Brazilian Francisco Alves Mendes Filho or "Chico" Mendes, formed a union of seringueiros (people who tap rubber), taking them to fight against devastation and in favour of creating "protected tapping areas", run by the local communities. Mendes was able to unite farmers, indians, trade unionists, priests and politicians in a revolutionary idea for the forest: a place without owners, where trees and men live and grow together, each taking care of the other. The true story of the defender of the Amazonia

forest, Chico Mendes, began when a tree fell... when on the 22nd December 1988 he was assassinated, at the age of only 44, outside his house in Xapuri by some land owners, who, together with some powerful men with rich finances, wanted to deforest Amazonia to build motorways and large infrastructures. During his short but intense life as a protector of civil rights and the environment, he took part in founding the Union of Rural Workers in Brasília and Xapuri, The National Council for rubber tappers and many other organisations. His work was officially recognised by the United Nations, who in Washington in 1987, awarded him with the UNE Global 500 a prize awarded for environmental protection. The figure of Chico Mendes became legendary after his death, so much so, that world



famous artists from Paul McCartney to Luis Sepúlveda, dedicated songs and books to him. His life story was told in the film, "The Burning Season", interpreted by the Portorican actor Raúl Juliá, who, by a twist of fate, died a few months after the film came out from an infection that he had picked up in Mexico during filming.





➔ **COLOMBIAN AMAZONIA IS NOW A LEGAL ENTITY**

In April 2018 the Colombian Supreme Court ruled that the Amazonia forest could be awarded the right of “legal entity”, this means that the area is fundamental to the life of the world and it has the same legal rights as a human being, first and foremost, the right to live. The sentence was given after an appeal by a group of 25 young citizens – aged between 7 and 26- who in January 2018 wanted to sue the Colombian government, for not having protected the forest from destruction, victim of strong deforestation caused by climate change, thus endangering their present and future and violating their constitutional rights. Apart from awarding the legal entity status to the Colombian forest, the Supreme Court gave the Colombian government a period of four months, to elaborate an action plan able to face indiscriminate deforestation, as all the region plays a fundamental role in safeguarding global climate.



BADEM PINARI

➤ **WATER SECTOR**

BADEM PINARI

Mucur, Kirsehir, Turkey

- COMPLETE LINE OF 22,500 bottles/hour
- integrated system ECOBLOC® ERGON 12-36-12 EV
 - shrink wrapper SK 600 F ERGON
 - automatic palletiser APS 1550 P ERGON
 - conveyors
 - sub-supply: rotary arm wrapper, labeller and inspection system.



VIDEO



GEO LOCATION



Badem Pınarı



A maze of towers, crevices, canyons, pinnacles and rugged castles; this is the fairytale landscape in the magical region of Turkey, in central Anatolia. Worthy of a book of fairytales, the enormous stone mushrooms that, funnily enough, are called “the fairy chimneys” were not created by a spell, but by the patient work of Mother Nature. It is in this region, rich with stone mines and marble quarries, that Badem

Pinari, leader in the mining sector, decided to branch out and invest in the bottled water sector, aiming at high quality products and excellent service, to compete and diversify itself among other companies present in this market. To carry out these aims, Badem Pinari turned to SMI for the project, creation and installation of a new production line of 22.500 bottles/hour to bottle and pack 0.33L, 0.5L and 1.5L PET bottles with natural mineral water.



BELOW: ZAFER OZCAN (IN THE CENTRE) SMI AGENT IN TURKEY, WITH THE STAFF OF BADEM PINARI.



The Badem Pinari company belongs to the Bademler group, which has been in the mining sector since the 1950's, extracting stones and marble which are then exported to 17 different countries, and was founded from the idea of the owner Murat Badem, who wanted to expand his business activities by investing in a new sector: bottled water. Despite the large number of soft drink and water bottling companies present in Turkey, the founder of Badem Pinari decided to become part of this "business" thanks to the results of in-depth market research which highlighted a great opportunity for growth; above all if you put the company's "mission" for product quality and customer service efficiency, in first place.



THE COUNTRY OF HORSES

Cappadocia, which in Persian means “the country of beautiful horses”, is to be found on a plateau at an altitude of 1000mt, in the heart of Turkey, in Central Anatolia, home to the cities of Aksaray, Nevşehir, Niğde, Kayseri and Kırşehir. This region is characterised by its unique geological formation and for its rich historical and cultural heritage, thanks to which, it has been on the list of the UNESCO World Heritage Sites since 1985. Its current geological shape came from millions of years of erosion to the soft layers of lava and ash (tuff)

which characterise the area, and which were formed following a long period of volcanic activity by the Erciyes, Hasandağ and Melendiz mountains. As a result, the erosion to the layers of tuff by the wind and the waters, from the lakes and rivers contributed to its current shape called “peri bacası”, or “fairy chimneys”. Cappadocia has an important historical and cultural past, thanks to its important commercial routes and the Silk Route, as well as its numerous invasions. The inhabitants of the region built underground shelters (some examples can still be visited in the cities of Kaymaklı

and Derinkuyu), which allowed entire cities to shelter underground and to survive for many months safe from their enemies.



THE “FAIRY CHIMNEYS”

Are the strange lava formations in the shape of a cone, hat or mushroom, which characterise Cappadocia. A fairytale landscape which is characterised by a maze of towers, crevices, canyons, pinnacles and rugged castles. These enormous stone mushrooms, that everyone calls “fairy chimneys”, are certainly worthy of a book of fairytales, but the corrugation to the Earth’s surface in the middle of the plateau in Central Anatolia, was not created by a spell but as the result of the patient work of Mother Nature with her enormous creative ability. The “chimneys” (called in this way,

because according to the legend the rocks on the top, were placed there by Gods) were often used as shelters by the hermit populations who dug their homes into the tuff and which, can therefore be considered true troglodyte (caveman) homes, the most important are in the Valley of Göreme, once the most populated area of Cappadocia and today a National Park. The soft rocks allowed man to dig into the tuff to create a network of caves, where murales were painted on the walls to embellish and refine them.

Today the Moon-like landscape of Cappadocia is dotted with cavities thousands of years old, many of which are still popular and inhabited. There are even entire underground cities dug into the rock, like that of Derinkuyu which extends over nine floors below ground level and that gave refuge to the population in the case of an enemy attack.



NATURE BEYOND THE IMAGINATION

Cappadocia offers fantastic nature to its visitors, which, together with its refined beauty, go beyond the imagination. The geological peculiarities in tuff, of the region, often causes the landscapes to be described as "lunar". For thousands of years, and still today, this vast area of Central Anatolia has been home to human settlements. Some ancient civilizations flourished there, like the Hittites, or others who came from Europe or from the same regions of Asia Minor, and each of which left their own cultural footprint in Cappodocia. Man built his abodes in the rocks and the holes that can be seen today, were the homes of cavemen, these evocative rocky settlements, some of which are still inhabited, make up the true, unmistakable landscape of Cappadocia. The people of Cappadocia, hid in the caves that were built in such a way that they couldn't be identified, with the aim of protecting themselves from invasions, raids and incursions.

Given that they might have to live there for long periods of time, they built storage for supplies, tanks for water, cellars for wine and temples for prayer. These unique underground cities, were built with such perfect technology, that even today, they amaze visitors with their ventilation systems, the tunnels for air circulation, safety systems, the interesting technology for entering and leaving, the wells and mechanisms for the collection of refuse. Built by Christians, who used them from 300 to 1200 AD to shelter from enemies, they were abandoned until around the mid 1950's, when youngsters of that period using them to play hide and seek, inadvertently helping to contribute to their re-discovery. Among the numerous underground settlements, those of Kaymaklı, Derinkuyu, Mazi, Özkonak, Tatlarin are the most impressive; Kaymakly, for example, is made up of eight underground floors, of which five can be visited, with a depth of 50 metres and a temperature of 15 degrees.

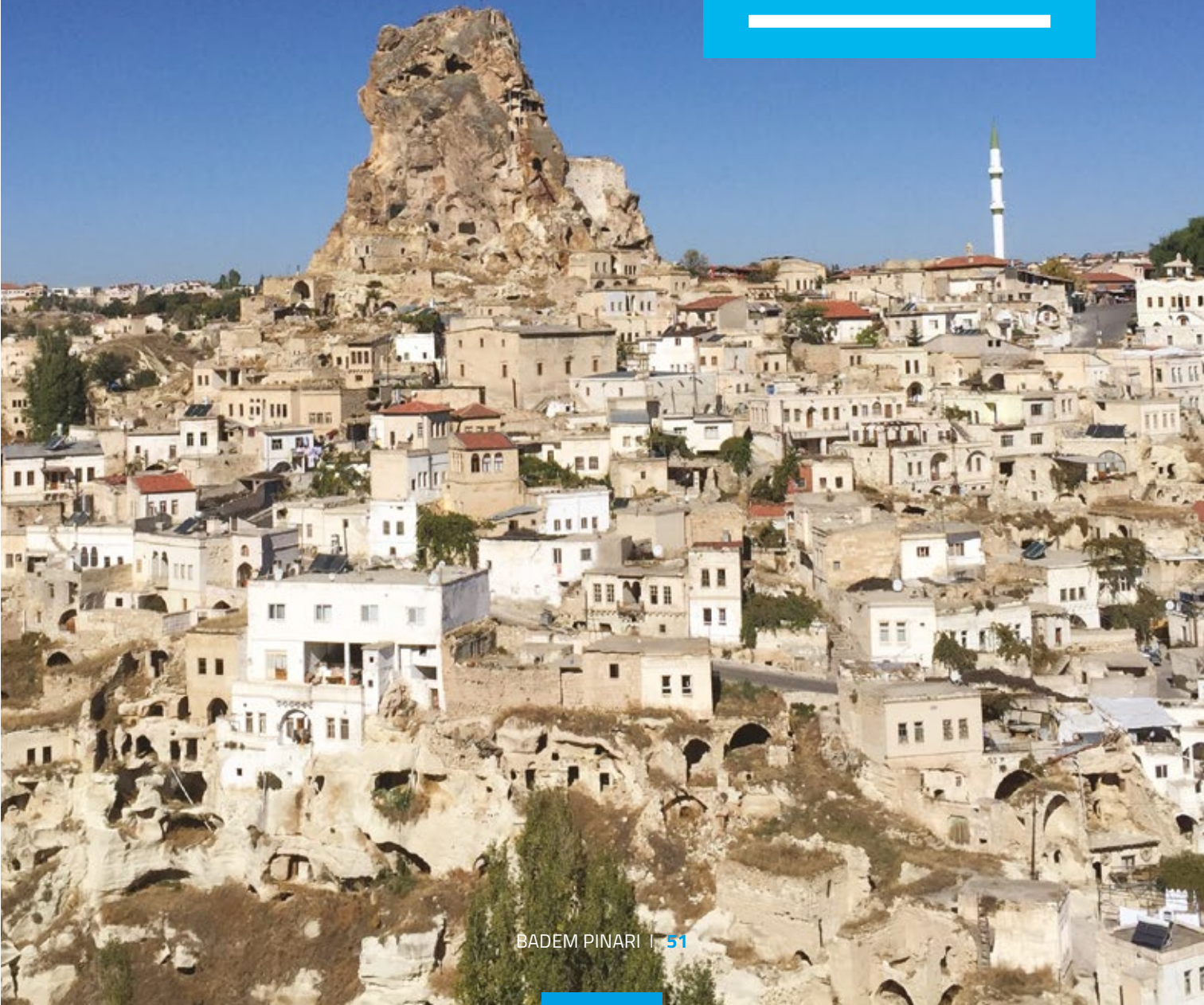


The inhabitants could spend up to six months there, the poorest lived in the lower floors, while the richest were nearer to the surface.



➤ **EVOCATIVE CITIES AND VALLEYS**

The names of the places in Cappadocia are often poetic (just think of the Valley of the Roses and that of Love), with particularly captivating geological formations. Not to be missed is the Valley of the Monks, once a shelter for hermits and the Valley of the imagination (Drevent Valley), where, if you let your imagination run wild, you can distinguish bizarre shapes and animals. Among the most characteristic cities, apart from Göreme, there is Ürgüp, which, for its typical geological formations, is vaguely like the city of Matera in Italy.



IN A HOT AIR BALLOON, ON HORSE BACK OR BY “QUAD”? HOW TO DISCOVER CAPPADOCIA

To discover the fairytale beauty of Cappadocia you can take an exclusively pleasurable ride in a hot air balloon, which takes flight early in the morning from the Valley of Göreme. Equipped with instruments to make it rise higher or fall lower, and also thanks to the skill of the pilots, the balloons sometimes reach 1000m in altitude, and sometimes fall so low

that they seem to touch the treetops. Offering the opportunity of a fantastic trip, blown by the local wind or by the winds at high altitude, to admire and discover from above, the magical Cappadocia, the incredible “fairy chimneys”, the settlements of Ürgüp, Avanos, Çavuşin, Zelve, Göreme, Uçhisar, the sun rise and its setting at dusk. Cappadocia can also be admired on horse back, an enjoyable group ride, organised towards creating harmony

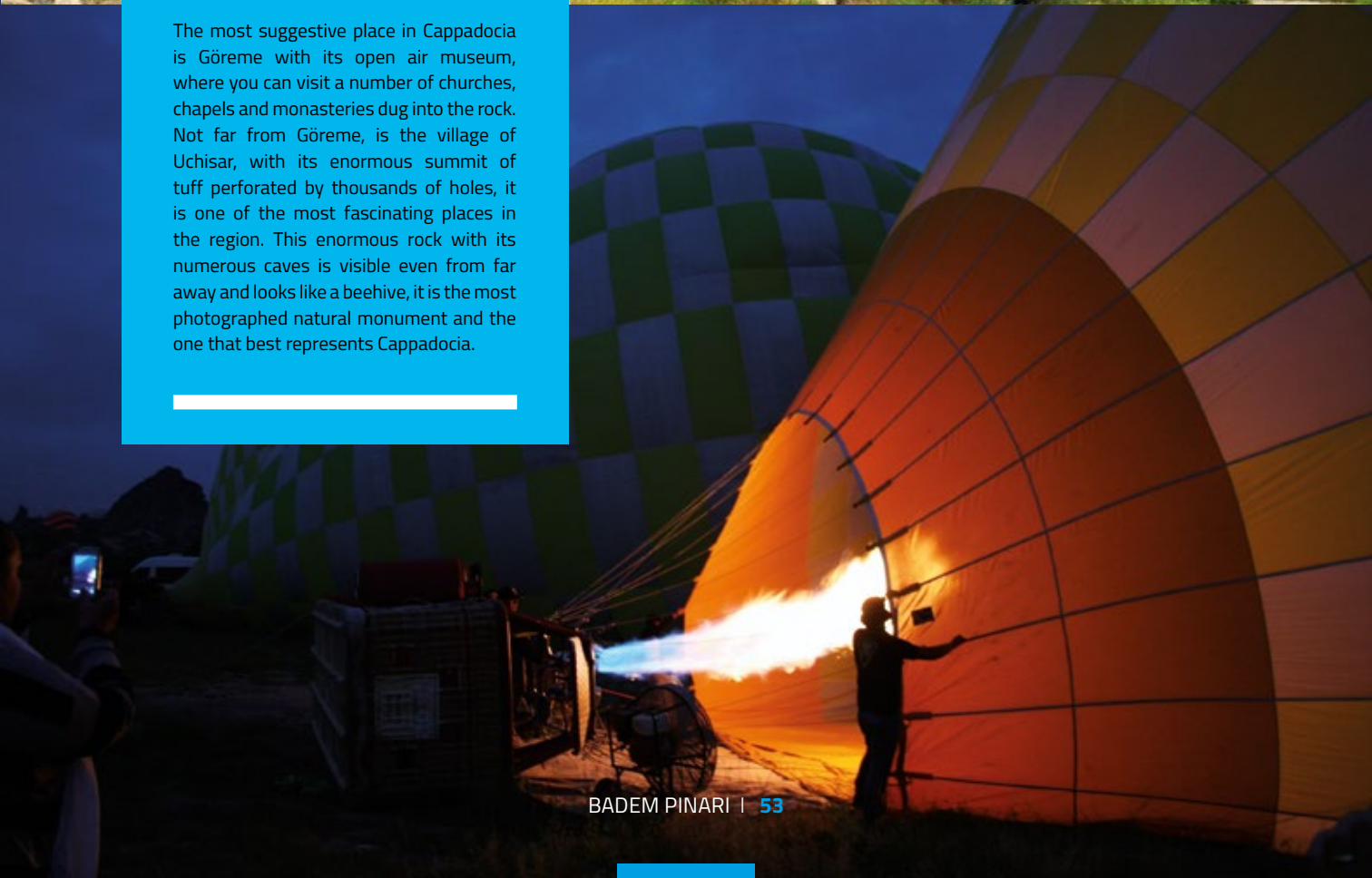
between nature and man, to discover the valleys that still maintain their simplicity and villages that live according to their traditions. An alternatively comfortable and fun way is by “quad”, in this way you can admire a varied number of valleys – which on foot would take hours or days – and stop in the more interesting places to explore on foot.





➔ **AN OPEN AIR MUSEUM**

The most suggestive place in Cappadocia is Göreme with its open air museum, where you can visit a number of churches, chapels and monasteries dug into the rock. Not far from Göreme, is the village of Uchisar, with its enormous summit of tuff perforated by thousands of holes, it is one of the most fascinating places in the region. This enormous rock with its numerous caves is visible even from far away and looks like a beehive, it is the most photographed natural monument and the one that best represents Cappadocia.





SMI SOLUTIONS FOR BADEM PINARI



The bottling and packaging line at Badem Pinari was designed and created to satisfy the specific requirements of flexibility, control and management of a modern "smart factory". The installations supplied by SMI can be easily and automatically adapted to market demand for production flow and to switch quickly from one bottle format to another.

The proposed solution, includes an integrated system from the ECOBLOC® range, an automatic labeller, a shrink wrapper and an automatic palletising system, which reply to the requirements of this Turkish company to have a functional production line which is able to produce high quality products for a high demanding market.





➤ INTEGRATED SYSTEM ECOBLOC® ERGON 12-36-12 EV

Functions: stretch-blow moulding, fiilling and capping of 0.33 L / 0.5 L / 1.5 L bottles in PET with natural mineral water Badem Pinari, and a production capacity of up to 22,500 bottles/hour (0.5 L).

Main advantages:

- The primary packing is carried out in an efficient and flexible way thanks to the integrated compact solution for stretch-blow moulding, filling and capping bottles in PET.
- Production of simple, light-weight bottles, that fulfill the need to reduce the cost of prime materials and the creation of an eco-sustainable product.
- Dual air recovery system, which allows to reduce costs tied to the production of high pressure compressed air.
- IR lamps mounted on the preform heating module to guarantee high energy efficiency.

➤ SHRINK WRAPPER SK 600 F ERGON

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

Packs worked: the 0.33 L and 0.5 L bottles in PET are packed in 4x3 and 6x4 film only; the 1.5 L bottles are packed in 3x2 film only.

Main advantages:

- Automatic machine suitable for packing different types of rigid containers.
- Rounded, anodised aluminium, sliding, protection doors, which allow all the motors (with low energy consumption) to be placed on the outside of the mechanical groups that they run.
- Infeed conveyor with a thermoplastic, low friction belt and a motorised system of oscillating separator guides.
- Film reel unwrapping controlled by a brushless motor which guarantees precise, constant film tensioning.
- Machine equipped with an innovative system of film splicing with a heated blade, this allows the ends of the two reels of shrink film to be spliced without stopping production.
- Reduced energy consumption and low maintenance costs.
- Compact knife group with film cutting blade run by a brushless "direct-drive" motor.
- Shrink tunnel with cutting edge technology to contain energy consumption and guarantee maximum environmental compatibility.
- High quality of final pack, thanks to the uniform distribution of hot air flow on all the pack surface inside the tunnel.



➤ AUTOMATIC PALLETISING SYSTEM APS 1550 P

Packed products: packs in film only in format 6x4 and 4x3 (0.33 L and 0.5 L bottles) and 3x2 (1.5 L bottles) coming from the shrink wrapper SK 600 F.

Pallets worked: 1000x1200 mm and 800x1200 mm.

Advantages:

- Single column with two Cartesian axis with SCARA technology, extremely flexible and easily adapted to any end of line logistic condition within multiple industrial sectors.
- Reduction of maintenance and energy costs, as well as lengthening the life cycle of the installation, thanks to the machine's mechanical simplicity and the use of components derived from robots.
- The automation and onboard management of the APS system is entrusted to innovative technology based on sercos fieldbus, thanks to which the operator, using a simple, intuitive, man-machine interface can quickly and easily manage all the end of line, palletising operations.

➤ CONVEYORS

Function: carrying loose and packed bottles in PET, in particular: moving bottles from the outfeed of the integrated system ECOBLOC® ERGON, moving in infeed/outfeed to the shrinkwrapper SK 600 F ERGON and moving in infeed to the palletiser APS 1550 P ERGON.

Main advantages:

- Constant, fluid no hitch movement of loose and packed bottles in PET.
- Format changeover times reduced to a minimum for the quick switch from one batch to another.
- Modular, ergonomic structure, which can easily be adapted to different sizes of containers or production flows.
- Energy consumption and running costs among the lowest on the market.
- Low running and maintenance costs.
- Product guides made from stainless steel and anti-friction UHMW plastic, which maintain the quality of the container.



A WORD WITH THE CUSTOMER

→ INTERVIEW WITH MURAT BADEM,
Owner of Badem Pinari



Q: Which factors drove your company to invest in a new bottling line supplied by SMI?

A: We all know that if we want to have a high quality product, we need to work with the best partners possible who offer solutions specific to our requirements. When we began this new activity in the bottled water sector, initially we contacted Zafer Ozcan, SMI partner in Turkey; he offered us excellent assistance, showing us the advantages of the new generation bottling and packaging installations produced by SMI, studied for the "smart factory" of the XXI century. Then we went to SMI HQ in Italy, where we saw the technology that had been

proposed to us and where we met Paolo Nava, Manager and CEO of the company. On that occasion we understood that, if we wanted a high quality product, the line solution proposed by Zafer Ozcan and SMI was the best choice. However, this still wasn't enough for Badem Pinari, we also wanted to count on an efficient and qualified team of technicians for after-sales and SMI also convinced us of this.

Q: What is the key to the rapid success of Badem Pinari in Turkey and abroad?

A: Before we began our activity in the bottled water sector, we carried out in-depth market research to evaluate the practicality of our idea and ambition to expand our company business. We knew that there were numerous companies working in the bottled water sector, but even so we decided to begin this new activity, because we strongly believe in product quality and excellent service. It was only thanks to these two elements that we would be able to have rapid success in Turkey and abroad. And so it was.

Q: What role must a supplier have to support the company growth of Badem Pinari?

A: The suppliers must be able to provide the best technical solutions that satisfy our requirements in terms of operational efficiency, energy savings and contained production costs. SMI helped us to choose the installation that was most suitable for reaching our aims and today we are able to create 0.5L bottles in PET for still water, that weigh only 9 g. They are very light containers that consumers are beginning to appreciate for their practicality, recycling and eco-compatibility and which will slowly take the place of the heavier, more rigid bottles that Badem Pinari are still using to bottle water.

Q.: How important is innovation to the development of your company?

A: If we can't grow and develop, we can't compete. That makes us losers. Having said that, I believe that innovation is a determining factor for the success and growth of Badem Pinari and for any other company that is looking to the future. Therefore, the collaboration with a reality such as SMI, which produces machinery and installations inspired by the principles of Industry 4.0 and IoT, will in that sense certainly bring tangible benefits.



THE MANAGEMENT OF BADEM PINARI DURING THE FAT IN SMI – FROM THE LEFT: MURAT BADEM, ZAFER OZCAN (SMI AGENT IN TURKEY) HALIL IBRAHIM BADEM AND YIGIT BADEM.



➤ **WATER SECTOR**

CASA DEL AGUA

Mexico City, Mexico

- monobloc Enoberg ELC 12-12-1 B A
- rotary table to load and unload bottles, inspection systems and saturator



VIDEO



GEO LOCATION

CASA DEL AGUA

RAINWATER IS AN IMPORTANT RESOURCE WHICH MUST NOT BE WASTED. THIS IS A WELL KNOWN FACT IN MEXICO CITY AND MORE PRECISELY AT THE "CASA DEL AGUA", A BAR IN VIA PUEBLA IN THE AREA CALLED COLONIA ROMA, WHERE THE ONLY DRINK IS RAINWATER, PURIFIED AND FRESHLY SERVED OR AS PART OF AN INFUSION.



BUSINESS AT ZERO DISTANCE WITH LATEST GENERATION TECHNOLOGY

Casa del Agua began as an eco bar in 2012 from an idea by Bozco Quinzaños, who has always believed in eco-friendly development and who created an original scenario where the protagonists are glass bottles, in which the rainwater is stored. It was a short step, from what started as a mainly manual production to an automatic one, able to serve a fast growing number of consumers! And it was very short for this Mexican company, which, thanks to the success of its initiative, had to quickly adapt to an industrial production system based on the use of automatic machines for bottling and capping glass bottles. To implement the new equipment in his bar, Bozco Quinzaños turned to ENOBERG for the supply of a turn-key line, that included a rotary monobloc from the ELC 12-12-1 B A range.



➤ **HALF WAY BETWEEN ORIGINAL AND BIZARRE,
A TOTALLY “GREEN BUSINESS CONCEPT”**

Innovation to attract customers and beat the competition, while at the same time launching new models of development, able to satisfy the consumers requirements, above all for those regarding environmental sustainability. Over the last few years there has been a growing number of “stores” opening, with distinct characteristics, future “formats”, that the French magazine LSA (specialised in commerce and consumption) put into a dossier, examining the thirty most significant cases in the world. Among these was, the new eco-friendly “concept” of Casa del Agua in Mexico City, just for the store’s idea: “selling rainwater” an idea that is halfway between being original and bizarre, all of which is carried out in full view of the customers. The structure has an enormous green roof, through which the rainwater is filtered, and then onsite there is a system for distilling and purifying it. The water is then sold in recyclable, screen-printed, glass bottles which on their own have a value of over 75% of the final cost of the product.

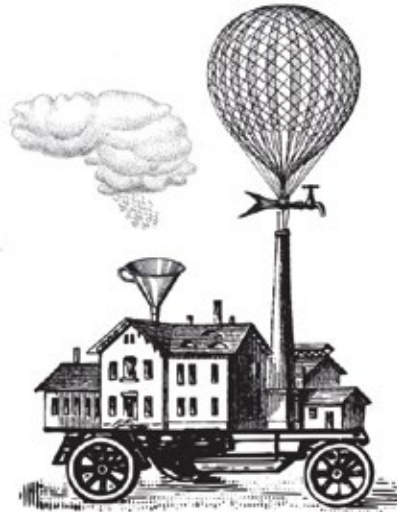


▼ **BELOW FROM LEFT:** KRISTIAN PÉREZ, TECHNICIAN FROM SMI CENTRALAMERICA; BOSCO QUINZAÑOS, OWNER OF CASA DEL AGUA; ZHAMARA LERMA, SMI CENTRALAMERICA SALES OFFICE AND STEFANO SCARONI, TECHNICIAN FROM ENOBERG.

THE ECO BAR THAT ONLY SERVES... RAINWATER!

“HI, COULD I HAVE A GLASS, PLEASE?” THIS SEEMS LIKE A NORMAL QUESTION FROM ANY CUSTOMER, STANDING IN A BAR, WHO WOULD LIKE A GLASS OF WATER, BUT... – LISTEN CAREFULLY – IN THE BAR OF CASA DEL AGUA, N° 242 VIA PUEBLA IN MEXICO CITY, PEOPLE DO NOT GO THERE TO DRINK THE USUAL ALCOHOLIC OR SOFT DRINKS, BUT THEY ONLY GO THERE TO DRINK RAINWATER. COLLECTED, PURIFIED AND FRESHLY SERVED. AT THE MOST YOU CAN HAVE AN INFUSION, AS LONG AS IT IS STRICTLY “HOME MADE”.

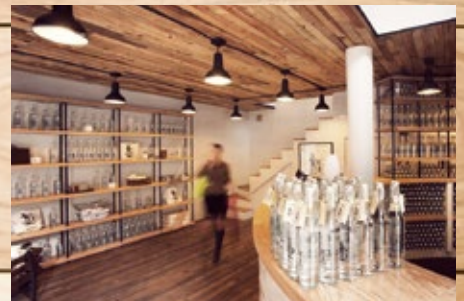
The bar owned by Bozco Quinzaños is an excellent example of an eco-friendly business venture, thanks to which the rainwater, always freshly served, does not need to be transported or stored, ready for consumption without any resource waste or polluting agents. Even the “location” of Casa del Agua was built with the aim of safeguarding the environment, using wood as the main building material (another important element that needs to be respected). Maintaining the philosophy of the founder, the design of this bar-shop is structured between wooden combinations and big, bright windows with a strong visual identity that immediately sends an image of lightness and simplicity. The line supplied by ENOBERG, represents the first of a series of similar installations that will be installed in Mexico to satisfy the growing number of consumers situated in different geographical areas of the country. To contain distribution and transport costs, Casa del Agua prefer to install a number of low speed production units, spread evenly across the country, rather than concentrate everything in a single high speed line.





WATER: THE MOST PRECIOUS RESOURCE FOR THE ECO-SYSTEM

Founded in 2012, this eco-friendly “bar” at zero distance was designed by the famous “interior designers” Héctor Esrawe and Ignacio Cadena, who reintroduced old traditions, eliminating the refrigerator and using natural materials like wood, and it is here among rustic and futuristic furnishings, that the water becomes perfectly pure, ready to be put into stylish, recyclable glass bottles, limiting waste production. The owners of Casa del Agua, convinced that water is a fundamental resource for the eco-system, decided to do something practical to preserve this precious, limited resource and they came up with the idea of building a system, partly on the top of their roof, to use rainwater, as in a city like Mexico City the annual rainfall reaches 750 millimetres. All this with the aim of offering its customers a pure uncontaminated product, undergoing the highest standard of purification available, which is high quality, healthy and alkaline (8.5 PH).



FROM RAINWATER... TO DRINKABLE FOLLOWING THE RHYTHM OF MUSIC

Converting rainwater to drinkable water is a long process which takes around 60 hours. It all begins with the collection of the rainwater on the terrace of the Casa del Agua. Then, the water is carried through pipes to be collected in a 2,500 litre tank which is hung from the roof, here it is filtered for the first time, according to high standards of purification which consider three distillations, evaporation, condensation and ionisation. While classical music accompanies the dance of the drips, a carbon filter removes the taste, the smell and the colour, this is followed by the distillation. By doing this, the water loses all pollutants but also its mineral properties, these are then restored by an active carbon filtre which is able to remineralise and ionise the product. A safe, efficient system, approved by the Mexican government, which follows a

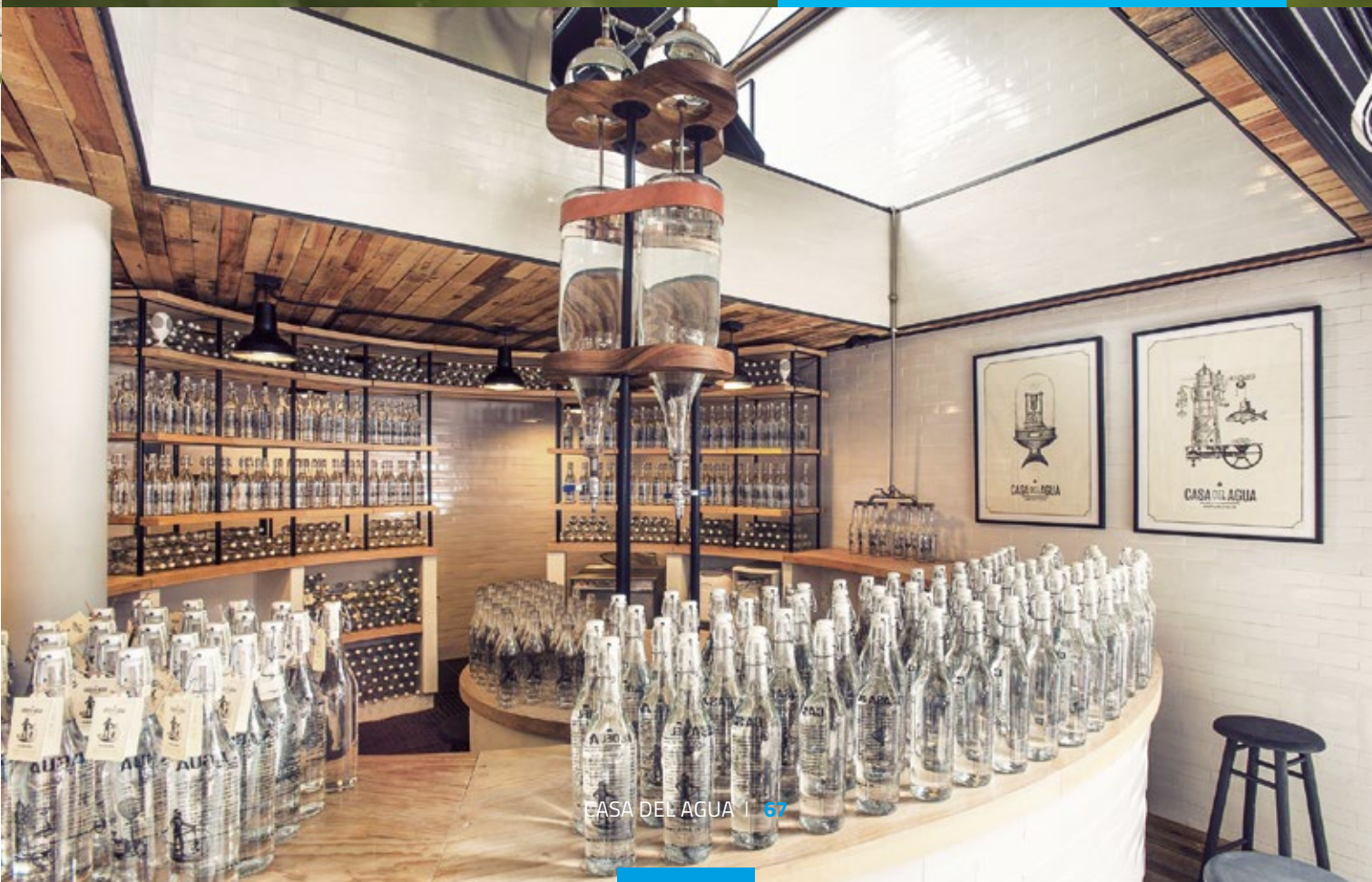
precise protocol for purification and which allows the use of underground waters to be spared, avoiding the waste of this precious and increasingly rare resource. Every litre of rainwater used by Casa del Agua is a litre of underground water that has been saved: a useful strategy to prevent the massive deterioration of underground water basins. The system, invented by this Mexican company, could be installed in all the houses where there is the constant problem of drinking water.





➤ THE ADVANTAGES OF THE CASA DEL AGUA RAINWATER

- High quality water containing a low concentration of mineral salts.
- The “packaging” is inspired by eco-friendly and recycling concepts, as it uses recyclable, reusable glass bottles.
- The water is collected and filtered onsite.
- The water undergoes a high level of purification, in that it is subjected to triple filtering, evaporation and condensation which make it pure and perfect to drink. It is then remineralised and ionised, increasing its alkaline, antioxidant and hydration properties.



ENOBERG SOLUTIONS FOR CASA DEL AGUA



To automate the bottling process of rainwater, Casa de Agua turned to the experience of ENOBERG, which supplied a turn-key installation with a monobloc ELC 12-12-1 B A comprising a rinser, filler and capper for aluminium screw caps. ENOBERG worked with the Mexican customer in every step, from the study, project, creation and installation of the production plant of 2,700 bottles/hour production plant, equipped with the most advanced technological solutions. The line supplied by ENOBERG allows Casa del Agua to efficiently follow its company "mission", that is to bottle rainwater, still or carbonated, which has previously been filtered and put through a process of mineralization and ionisation in order to maintain all its qualities. The solution supplied includes, as well as the monobloc, a rotary table to manually upload the bottles on to the line, inspection systems for checking the level, the presence and correct position of the cap, a progressive expeller to expel any bottles that are not compliant with the line, a saturator to carbonate the water and a rotary table to manually offload the bottles from the line.

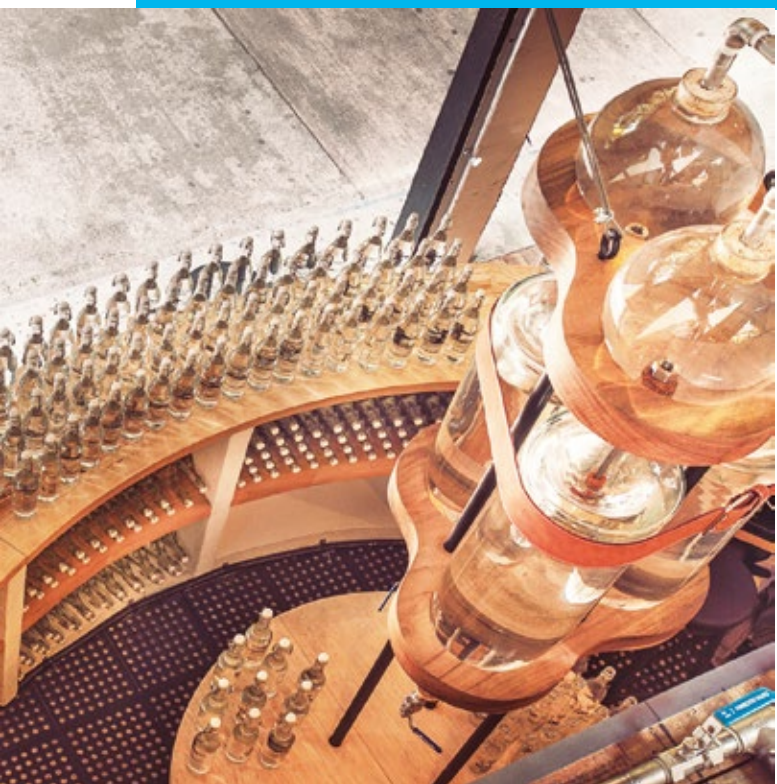


➤ **MONOBLOC SYSTEM ELC 12-12-1 B A**

Functions: rinsing, filling and capping of 335ml screen printed glass bottles, with a production capacity of up to 2,700 bottles/hour. Machine geared to run future 600ml glass bottles.

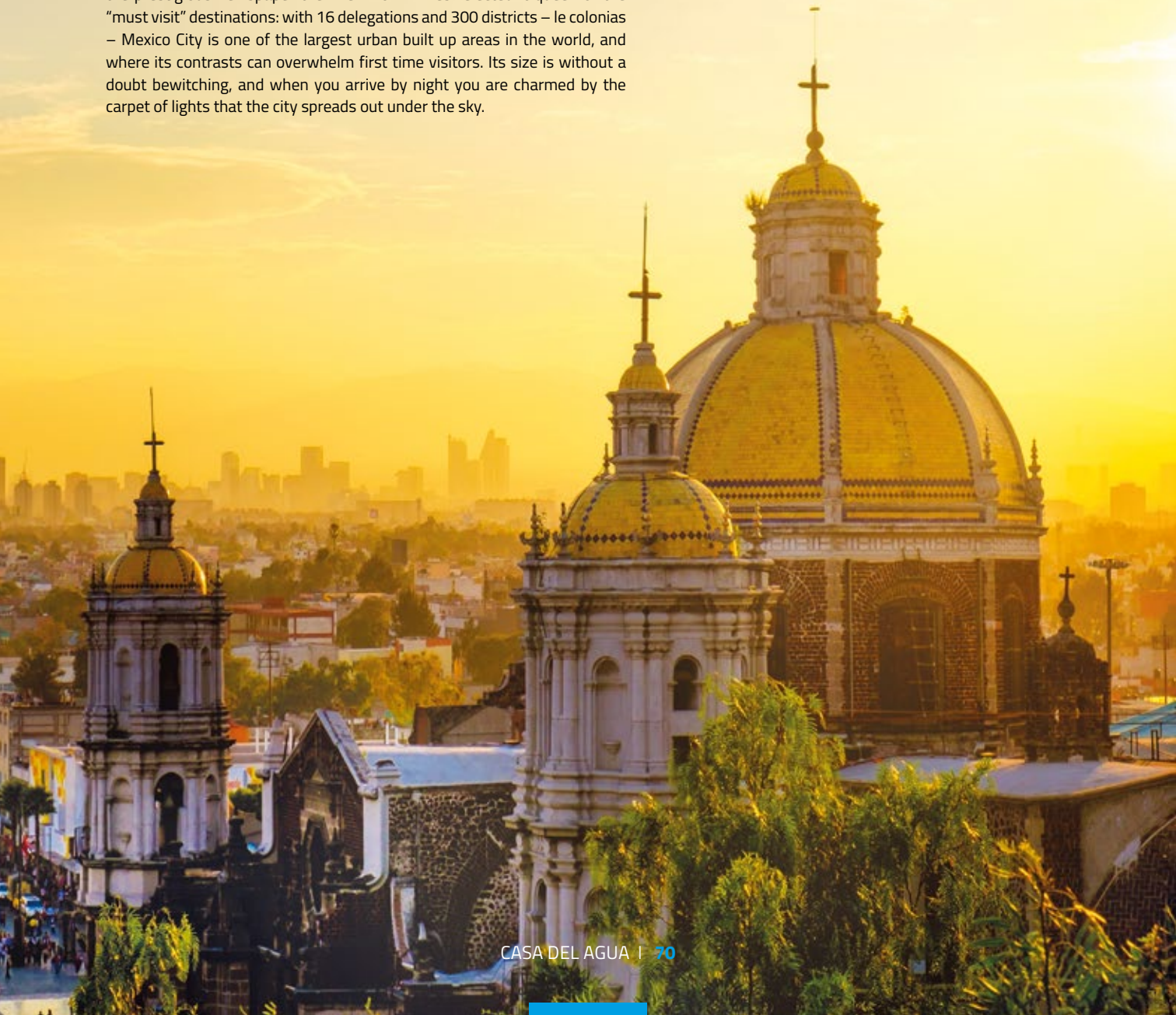
Main advantages:

- Electro-pneumatic filler valves (pneumatic valves activated by solenoid valves) for counter-pressure gravity level filling, which facilitate the automation of all the bottling functions.
- Equipped with a tank suitable to resist pressure of up to 6 bar.
- Independant setting of each electro-pneumatic valve by means of HMI.
- Independant movement of the machine axis through ICOS brushless motors with integrated control, in order to guarantee perfect synchronism between the stars, low noise during running and easy maintenance.
- Diagnosis of motor operating conditions through HMI.
- Quick bottle changeover parts and pre-programmed recipes, enabling quick changeover at a software level.
- "Dummy bottles" system to be positioned in a quick and easy way.
- Filler can be fully cleaned thanks to the dummy bottles and to the piping system, designed for recovery or recycling, depending on the needs, of the washing solution and washing operation.



HISTORY AND TRADITIONS IN A MODERN CONTEXT. THIS IS MEXICO CITY.

Mexico City, capital of the country of the same name, offers a lot to its visitors. In the second most populated city after Tokyo, smog, traffic and skyscrapers merge with the folklore, the traditions and history of a fascinating population. In 2016, the prestigious newspaper the "New York Times" elected it queen of the "must visit" destinations: with 16 delegations and 300 districts – le colonias – Mexico City is one of the largest urban built up areas in the world, and where its contrasts can overwhelm first time visitors. Its size is without a doubt bewitching, and when you arrive by night you are charmed by the carpet of lights that the city spreads out under the sky.



**FOR THOSE WHO ARE LOOKING FOR A REASON TO VISIT MEXICO CITY ...
HERE ARE A FEW CURIOSITIES AND REVELATIONS ABOUT THIS DESTINATION:**

1. Mexico City is one of the capitals with the most museums in the world.
2. It is home to the only castle in Latin America, the Castillo de Chapultepec, dating back to the XVIII century, in the past it was an imperial palace and a presidential residence.
3. It has two UNESCO World Heritage sites: its historic centre and the campus of Universidad Nacional Autónoma de México (UNAM).
4. The forefather of Mexico City was called "Tenochtitlán", founded by the Aztecs on lake Texcoco and destroyed by the Spanish, today remains of canals can still be seen at Xochimilco, located in the extreme south-east of the city, which is now called "Mexican Venice".
5. Every year in mid July, in the neighbourhood of San Ángel, the "Feria de las flores" is held, the flower festival, a huge market where you can buy beautiful floral compositions to give to your loved ones.
6. Mexico City is home to one of the most visited religious sanctuaries in the world, the Basilica of Guadalupe, second only in popularity to the Basilica of Saint Peter in the Vatican.
7. It is home to the first hospital in America, "Hospital de San Felipe de Jesús", built in the XVI century.
8. Constitution Square, "El Zócalo" located in the historic centre, with its 5 thousand square metres is the second largest public square in the world.
9. The best way to get a scenic view of Mexico City is to climb to the top of the "Torre Latinoamericana", the first skyscraper to be built in 1956, and with its 44 floors and height of 183 metres, is one of the most famous buildings in Latin America.
10. Not far from the city centre you can visit "Plaza México", the largest "plaza de toros" in the world, with a diameter of 46 metres and which can hold more than 45,000 spectators.



REDUCING WASTE TO INCREASE SUSTAINABILITY

In the era of industry 4.0, we define the “smart factory” as a place where companies have automated, interconnected, eco-sustainable and energy efficient production systems.

Energy is becoming increasingly precious and the companies who manage large bottling and packaging plants are particularly attentive to how it is used.

Respect for the environment in which we live, the need to save energy and contain costs require innovative solutions to avoid useless waste, like those, for example of maintaining the average lifespan of electrical motors, used in the industrial sector.



SAVING WITH HIGH EFFICIENCY MOTORS

Machines supplied by SMI ensure high level performance, thanks to the use of high efficiency brushless “Icos” motors, which have built-in digital servo-drive. This solution allows the operation to be more flexible and personalised, it optimises consumption for each specific application, avoiding using extra energy when not needed. Therefore, these motors only supply the amount of energy required in that moment, ensuring savings of up to 35% compared to models with previous technology. Traditional asynchronous electrical motors don't perform as well as



TOOLS WHICH ARE ALWAYS TIDY AND ALWAYS AT HAND

the SMI ICOS models, as they are subject to mechanical loss of energy caused by the friction of the bearings and brushes and the ventilation. Whereas, electrical high efficiency motors, have improved performance and less consumption, thanks to a number of factors:

- quality of materials used in production
- less heat generation (smaller cooling fans and therefore, less mechanical loss)
- simplified cabling, which generates less heat in the electrical cabinet because the built-in digital servo-drivers do not require conditioners for temperatures less than 40°C.

Consequently, with the same power, the ICOS motors are more efficient compared to traditional ones.



Designed and built to hold a high number of tools to manage and maintain SMI primary, secondary and tertiary machines, the new tool case trolley is the ideal solution to facilitate operators working on the bottling and packaging line.

Different types of tools can be placed in the spaces on the trolley's sides so that they are always tidy and always at hand.

The internal space has also been divided in a simple rational way, so that different types of tools can be stored in a specific way.

Supplied with wheels, the tool case trolley can quickly and easily be moved around the production area according to operational necessity.

It is a simple but extremely functional accessory, that facilitates the production line, increasing efficiency and reducing costs.

The trolley can be purchased with the machine or after machine installation at the customer's plant, it is ready to use immediately.



PID SBP

GREATER PROTECTION FOR GLASS PRODUCTS

To give maximum protection to packed, fragile, delicate containers, such as those in glass, it is possible to install an accessory PID device (Partition Inserting Device), which inserts preassembled rigid partitions inside the pack. This device can be installed on SMI wrap-around case packers from the WP and CWP range and on combined packers from the CM range. The main characteristics of this innovative system are:

- the PID and the partition magazine are situated above the pack former area.
- a mechanical arm equipped with vacuum suckers picks a stretched board pre-assembled partition from the partition magazine, opens it and lowers it between the products that have just been grouped in the required pack collation.
- the maximum operating speed for the PID is 40 packs per minute (1 head model) or 60 packs per minute (2 head model).





➔ A FEW ADVANTAGES OF THE PID

- high flexibility of use
- no banging between the cardboard sleeve and the containers
- maximum efficiency for product marketing
- compact solution: the PID is mounted on the top part of the machine, in this way the machine dimensions are the same as those of a conventional case packer
- fast partition insertion as they are already pre-assembled.



PROTECT YOUR PRODUCTS WITH A WRAP-AROUND CASE

Packaging in wrap-around, undulated, cardboard boxes is the ideal solution to have a pack that is resistant to knocks and protects the integrity of the containers, especially those in glass, during transport. This type of packaging can be carried out on SMI wrap-around case packers from the LWP, CWP, WP, LCM and CM ERGON range, suitable to pack a wide range of containers in cardboard wrap-around boxes or in cardboard tray only (LWP, CWP and WP range), or in wrap-around cardboard boxes, in cardboard tray only or in cardboard tray + film (LCM and CM range).

The innovative system of wrap-around packaging allows just one machine to form the cardboard box and close it with the product inside, having the advantage of improved protection, as there is no banging between the products in the cardboard sleeve. In addition, with the continuous motion pack formation, the pack is made within the product grouping area without stopping the machine, and therefore having the possibility to reach higher speeds compared to other cardboard box packaging solutions which are available on the market.



MP ERGON

BESPOKE SOLUTIONS TO PACK CONICAL SHAPED JARS

The “packaging” of shelf products needs to attract the consumer’s attention, distinguishing itself from similar products on display.

Therefore, a growing number of companies focus their attention on “packaging design” which is an important instrument for promoting brand marketing.

As a matter of fact, the aesthetic aspect of the pack is currently used to convey the “advantages” of the product to the consumer, using originality, innovation and convenience as leverage.

Within companies from the “food & beverages” sector, these elements are held in high consideration by the people who invest in machinery for secondary packaging.

For instance, SMI packers from the MP ERGON range are the ideal solution to create cardboard packs with captivating graphics and a strong visual impact, which attract consumer attention and can be equipped with “bespoke” solutions for containers of a particular shape, for example, conical jars with a base that has a smaller diameter than its top, create empty spaces between the jar bases as these do not touch.

To remedy this problem of container instability, SMI came up with a device on the packer infeed conveyor which reduces the “gap” which is created at the bottom part of the jars, grouped in formats of 2xn. In this way, the products remain blocked inside the cardboard sleeve protecting them from falling out, without needing any additional side protection such as top or bottom flaps.

The continuous motion packaging system on the SMI MP ERGON case wrappers



guarantees a fluid production process, which preserves the integrity and the quality of the product thanks to packs which are highly resistant to knocks and are easy to handle, open and store.



SMY HELP DESK

DISCOVER THE NEW SMI CUSTOMER SERVICE CENTER



In the hyperlinked, multi-channel world of today, it is fundamental to build relationships with customers using every kind of communication channel available. By phone, e-mail, electronic posts, chat lines, social media and SMS, customers are driving the evolution of customer services in a growing number of companies and sectors. Quality and efficient after-sales technical assistance are two fundamental aspects of SMI activity, which, to improve the level further, has recently reorganised its services, online and offline, creating the new Smiy Help Desk. It not only manages customer phone calls, but also all the information and customer-company relations, so that the help centre team can efficiently relate to those in need of help or assistance for an SMI machine.

FAST PERSONALISED REPLIES

Customers can contact the SMI help desk in the way that is the most suitable to their needs: by telephone, chat or through the Smypass web page. Each request that arrives, no matter which channel it has come through, is given a "ticket" reference number that is assigned to the technician who is the most appropriate for the type of machine for which the customer is asking assistance. The complete chronology, from customer contact, obtaining the automatic "ticket" reference number, logging of the problems and the replies, allow the SMI staff to offer an extremely personalised service. Thanks to the database of old customer requests, from receiving the ticket to the report at the end of the intervention, the "help desk" technician is immediately able to understand the situation of the machines installed at the customer's site and can therefore give focused and more efficient support.

➤ SMI HELP DESK ADVANTAGES

- **Multichannel service:** the service is accessible through the web, chat and telephone.
- **Multilanguage system:** the switchboard identifies the country of the receiving call and automatically updates the language of the messages accordingly: in Italian, French, Spanish or English.
- **Bespoke assistance:** the service begins when the customer gives the serial number of the machine needing assistance, the system registers it and the request is managed by a technician specialised in that type of product.
- **Personalised service:** each request for assistance generates a reference "ticket" number which is registered in the SMI management database; the chronology of interventions guarantees immediate and personalised replies, the help desk technician can understand the history of the customer and that of their machines in real time.
- **Improved relationship SMI-customer:** the open "ticket" generated from the request for assistance will be managed by the same technician until the problem has been resolved.



IN GLASS OR IN PET?

IT DOESN'T MATTER IF YOU NEED TO BOTTLE IN PET OR GLASS: THE TYPICAL VERSATILITY OF THE RINSING, FILLING AND CAPPING MONOBLOCS SUPPLIED BY ENOBERG ALLOW THE PLANT'S END USER TO FILL BOTTLES OF ANY KIND, QUICKLY CHANGING FROM ONE CONTAINER TO ANOTHER ACCORDING TO THEIR NEEDS. AN ENORMOUS COMPETITIVE ADVANTAGE FOR BOTTLING COMPANIES AS THEY CAN EASILY ADAPT THEIR PRODUCTION TO THE REQUIREMENTS OF THE CONSUMER MARKET.

The market of packed beverages is continually evolving and requires filling solutions that are increasingly versatile, able to quickly and easily adapt to new requests from companies within the sector. When ENOBERG, part of the SMI Group and specialists in the design and production of fillers for liquid food, begin to project a new bottling line they pay a lot of attention to the choice of the best solutions available for the customer, so that the proposed installation will be functional for present and future formats, ensuring reduced management and maintenance costs and guaranteeing greater energy savings.



➤ A SIMPLE BUT BRILLIANT INVENTION

The crown cap has played a fundamental role in the development of carbonated beverages, before its invention, it was impossible to transport the beverages very far as the liquid leaked and the carbon dioxide, needed to make the "bubbles", evaporated". All this changed on the 2nd February 1892 in Baltimore USA, when the Irish mechanical engineer William Painter patented a simple metal cap with a corrugated edge in the shape of an upside down crown (reason it is known as "crown cap") and at the same time established Crown Holdings Inc to commercially exploit the new invention. In the second half of the 1960's, still in the USA, "screw crown caps" were created, avoiding the use of a bottle opener and, thanks to the threading on the bottle neck, allowed the remaining unconsumed beverage to last longer by putting the cap back on the container.

ENOBERG

SOLUTIONS OF VERSATILE FILLING

During the 2018 edition of the Brau Beviere international exhibition, held in Nuremberg last November, ENOBERG presented the ELC 12-12-1 B C monobloc for rinsing, filling and capping of 0.5L bottles intended for the beer sector. The installation exhibited at the Smigroup stand is able to fill bottles in PET, blown by an EBS ERGON supplied by SMI, or glass bottles at a maximum speed of 2,000 bottles/hour in a 0.33L format (according to the characteristics of the container), in both cases also capping the bottles with a crown seal.

In the version designed for bottling beer, the ELC monobloc is equipped with a vacuum system, to carry out double pre-evacuation of the oxygen present within the bottle before the filling phase. Thanks to this device, the oxygen present in the bottle is almost completely eliminated, guaranteeing not only a longer product "shelf life" but also that the taste remains unchanged over time.

Furthermore, the model presented at Brau Beviere was equipped with a system for capping, suitable for applying crown caps, a successful solution that received a lot of approval from companies within the sector interested in exploiting opportunities offered by the evolution of the consumption of beer in bottles made from PET.



ELC SERIES

ISOBARIC LEVEL ELECTRO-PNEUMATIC FILLER

The ENOBERG ELC range satisfies requirements that are extremely different, in terms of production and liquids to bottle, this is possible thanks to a series of innovative technical solutions that make the installation of this range versatile and easy to maintain, suitable for running different products such as still and carbonated water, carbonated soft drinks, beer, sport and energy drinks.

The heart of the machine is the innovative electro-pneumatic filler valve, that is a pneumatic valve activated by solenoid valves, which are the ideal solution for isobaric level filling and which facilitates the automation of the bottling operations (more precisely in the pre-evacuation, bottle pressuring, filling and auto-levelling stages).

➤ CHARACTERISTICS AND ADVANTAGES

The machines in the ELC range, available in the versions: filler/capper and rinser/filler/capper, are equipped with technologically advanced solutions, like:

- Electronic machine with transmission systems through brushless motors and integrated electronic operation (ICOS range), to guarantee perfect synchronisation between the bottle transfer stars and low noise during running.
- Quick format change of bottle guide equipment.
- The machine can be fully cleaned, thanks to the "dummy bottles" and the piping system to allow closed circuit cleaning.
- Possibility to work carbonated or still products.
- Module structure that can be personalised.
- Compact filler module, that minimises the number of bottle transferring stars and guarantees easy access to the machine for maintenance and cleaning.
- Low running and maintenance costs.
- Low risk of contamination and high level of hygiene.
- Excellent quality/price ratio.



Equipped with a tank that can stand pressures of up to 6 bar, the ENOBERG filler in the ELC series has a wide "range" of production, thanks to its configuration with 5 to 48 filler taps.



ELC SERIES

SIMPLE AND SMOOTH RUNNING

The transfer from the rinsing phase of the bottles to the capping, happens very smoothly by “neck handling” direct transfer using a star-star system. The bottles are introduced into the machine by an air conveyor for bottles in PET, or by chain conveyor for glass. At the rinser infeed a specific star picks the bottle from the conveyor and transfers it onto the rinser carousel, where a gripper (called “tampon”) takes it by the neck and inverts it 180°, placing the mouth in line with the correct rinser nozzle (this dispenses water or air according to the product and/or to the customer’s requests). Once the rinsing has ended, the bottle is inverted once more and transferred to the filling carousel, consisting of a valve that is activated electro-pneumatically. The first phase of the operation is putting the bottle into pressure, or in the case of beer, the double pre-evacuation of the oxygen. The second phase is the filling, which ends when after reaching a determined level, the valve closes and the decompression phase begins. Finally, the bottle is transferred to the capper to be capped after which it is carried along the conveyor to the machine outfeed.

➤ THE MARKET FOR BEER IN PET

A growing number of beer producing companies have announced the launch of new containers in PET to market their brands, this trend demonstrates the excellent qualities that this material has, to preserve the organoleptic characteristics of beer, apart from giving the possibility to create containers with original shapes and innovative eye appealing solutions. The use of bottles in PET to bottle beer is a constantly growing phenomenon, as this type of container is unbreakable, hygienic, lightweight, convenient and practical, ideal to be consumed in the open-air where glass is forbidden, such as crowded events (concerts, football matches, public events, etc). Today there is a wide offer available to breweries large and small, bottles in PET that look like those in glass, characterised by a crown cap, flat base, decorations applied directly on the surface, and new eye-catching designs, achieved by combined designing of container, label and “overpackaging”. Lightweight, unbreakable, fewer production and transport costs, no breakages on line – and therefore no stopping production – and the possibility to easily put the cap back on the bottle once opened: these are only some of the advantages of using containers in PET within the beer sector.



A FEW NUMBERS ON WATER



22ND MARCH WORLD WATER DAY



World Water Day is celebrated every year on the 22nd March, this anniversary was founded by the General Assembly of the United Nations in 1992, and was celebrated for the first time in 1993. The aim of this initiative is to raise public awareness to the essential importance of the primary resource for excellence, "running water" and to promote the sustainable management of water resources. According to ONU, global demand has increased by more than six times in the last hundred years and continues to grow by 1% each year, for this reason in 30 years the world could need 30% more water compared to today. A resource, therefore, that is increasingly more precious and accessible to an increasingly limited number of people.



- **40 litres/day:** is the minimum quantity of water necessary to satisfy the vital needs of man; 40% of the world population lives below this threshold. Source: OMS
- **+55%:** is the increase in global demand for water from now until 2050. Source: OCSE
- **140 litres:** is the amount of water needed for a cup of coffee, considering the total volume of the liquid used during every step of the production chain. Source: www.impronta-idrica.org

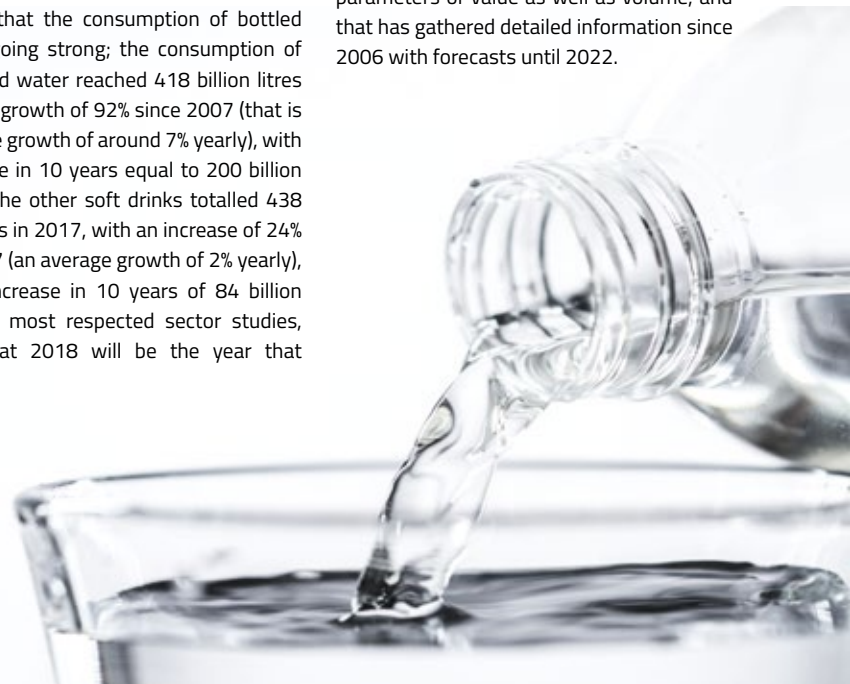
- **6,000 litres per year:** is the quantity of water wasted by a single tap which drips every two seconds. Source: Green Cross Italia
- **1.4 million:** is the number of children who die every year from illnesses caused by contaminated water or lack of sufficient hygienic measures. Source: UNICEF

SUPER WATER

BOTTLED WATER WILL EXCEED ALL SOFT DRINKS, AS SHOWN BY THE GLOBAL DRINKS DATABASE

It seems that the consumption of bottled water is going strong; the consumption of just bottled water reached 418 billion litres in 2017, a growth of 92% since 2007 (that is an average growth of around 7% yearly), with an increase in 10 years equal to 200 billion litres. All the other soft drinks totalled 438 billion litres in 2017, with an increase of 24% since 2007 (an average growth of 2% yearly), with an increase in 10 years of 84 billion litres. The most respected sector studies, predict that 2018 will be the year that

bottled water will overtake, as globally the consumption of bottled water should exceed that of soft drinks. This prediction is the result of accurate elaboration of data available on the new online database Globaldrinks.com, which considers 24 categories of soft drinks and covers 86 countries, following parameters of value as well as volume, and that has gathered detailed information since 2006 with forecasts until 2022.



SMI TECHNOLOGY FOR INDIA

The Indian market in the food and beverages sector is currently undergoing substantial growth, the VDMA association, the conceptual sponsor of the Drink Technology India (DTI) exhibition, which was held in Mumbai from the 24 to 26 October 2018, predicts a growth of more than 100% by 2021 for soft drinks and of around 35% for alcoholic beverages. This growth is fuelled by social change and the country's intense economic expansion, to be able to face it, lots of companies in the sector, need to heavily trust imported technology, machines and know-how, above all concerning secondary packaging machines. For this reason the solutions exhibited at the SMI stand at the DTI exhibition, received great interest from local businessmen involved in the production of food and beverages.



TAKE5 FIVE STEPS TO FEEL GOOD

Workplaces are particularly good places to promote well-being and can play a fundamental role in reducing the most important risk factors among workers. On the 29th October 2018, SMI won an award for accredited workplace, as part of the WHP – Workplace Health Promotion program, from Ats Bergamo and the group Giovani Imprenditori di Confindustria Bergamo during the "Take 5: five steps to feel good" event.



TECHNOLOGY AND THE LOCAL COMMUNITY

GROWING TOGETHER

On 5th December 2018, the ceremony of placing the foundation stone of the new San Giovanni Bianco municipal bridge took place at the headquarters of SMI S.p.A. The work, which will be carried out thanks to the commitment of SMI and public authority, is aimed at improving practicability, safety and occupational development and expresses the attention of pursuing the well-being of the local community.

In the photo: the mayor of San Giovanni Bianco Marco Milesi is placing the foundation stone.



ITALY - SWEDEN

THE PARTNERSHIP CONTINUES

A year later and the agreement between SMI, the Technical Industrial Institute Paleocapa in Bergamo and the technical institute ABB industry Gymnasium in Västerås-Sweden is still continuing. The Swedish student Jonathan Bergroth (in the centre of the photo) took part in the exchange program and during his stay at SMI, he collaborated with the design and technical documentation staff also taking part in FAT (Factory Acceptance Test).





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