

- Macks Ølbryggeri ■ Procordia ■ Pinar
- Wilmar Continental ■ Antigua Distillery

smi now

Magazine 2013/11

MACKS ØLBRYGGERI & PROCORDIA

TWO PET LINES IN

Scandinavia

HSR - High Speed Rotary

THE NEW STRETCH-BLOW MOULDER
EQUIPPED WITH REVOLUTIONARY
TECHNOLOGY THAT WILL CHANGE
THE PET WORLD

APS 3100 LP Plus

THE "3 IN 1"
COMPACT SOLUTION

MEET US AT HALL A6 - STAND 303

drinktec.com

16-20 September 2013

New Munich Trade Fair Centre

www.smigroup.it



“ SMI’s novelties at Drinktec that will revolutionize the packaging industry ”

The food and beverage industry has now reached such dimensions worldwide that it imposes, on anyone operating in this sector, increasing sensitivity towards the issue of sustainable development

and impact that production processes can have on environmental balance.

Programs started on a global scale to tackle the complex problems relating to global warming, climate change and saving of energy resources aim at defining development strategies based on the construction of production facilities featuring high efficiency, low power consumption and reduced running and maintenance costs.

To meet these needs, SMI will present some innovations at Drinktec 2013 that will revolutionize the packaging industry.

Specifically, at the Munich trade show we will be exhibiting a new series of Smiform rotary stretch-blow moulders, called “HSR (High-Speed Rotary)”, the design concept of which is totally innovative and very different from any other existing system in this specific field of application.

It is a revolutionary technology that allows reaching a production speed of up to 2,500 bottles per hour per cavity and energy savings up to 30% (data pertinent to a 0.5 liter PET container) thanks to the innovative preforms heating system designed by SMI’s research labs.

On the Smiflexi secondary packaging front, we are presenting the new automated “Easy-Load” cardboard blanks magazine, which can be installed both on the WP series wrap-around case packers and on the SK series shrinkwrappers, while with regard to the Smipal palletizers range there is an especially interesting new end of line solution represented by the “APS 3100 LP Plus” automatic palletizing system, a very compact system that also integrates both the system that feeds the empty pallets and the system that inserts the interlayers between one layer and the other into the load-bearing structure of the central column.

Thank you for your kind attention.

Kind regards.

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

sminow | magazine

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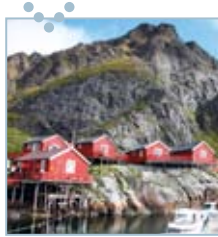
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drinktec
Go with the flow.

HALL A6 - STAND 303
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MACKS ØLBRYGGERI

BEVERAGES SECTOR

AS L. Macks Ølbryggeri og mineralvannsfabrikk
Nordkjosbotn, Norway

- 25,200 BPH PET LINE:
- Smiform ECOBLOC®14-78-14 LG-VMAG integrated system
- Smiline conveyor belts
- Smiflexi SK 802 F Shrinkwrapper
- Smipal APS 3080 P Palletizer
- High pressure compressor, CIP, premix, rotary labeller, control systems, coder



VIDEO



GEO LOCATION

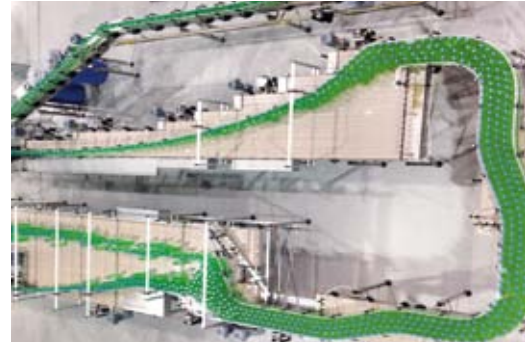
INSTALLATION / Macks Ølbryggeri



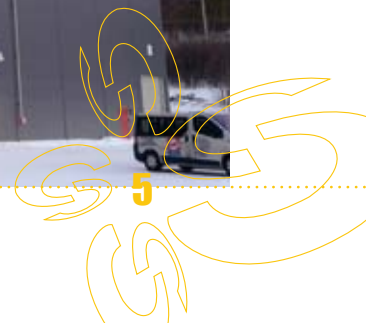
The Norwegian Macks Ølbryggeri brewery, the most northerly one in the world, boasts a long tradition in the production of excellent quality beer with a unique taste, just excellent, unique and unforgettable as are the Aurora Borealis, Northern Cape, the midnight sun and any other genuine thing from northern Norway.

Macks Ølbryggeri has recently invested in the expansion and modernization of the plant in Nordkjosbotn, a small village 70 km south-east of the city of Tromsø.

For this project, the Norwegian company relied on SMI technology and experience for the design and supply of a complete new PET line for the bottling and packaging of products of the "soft drinks" line, bottled and marketed under licence of the Coca-Cola Drikker Norway company (CCDN).



The new production plant is the most modern and innovative one on the market and is an exceptional springboard for the future growth of Macks Ølbryggeri.



Mack®

THE WORLD'S NORTHERNMOST BREWERY HAS CHOSEN SMI

All products leaving the Macks Ølbryggeri facility of Nordkjosbotn undergo stringent quality controls throughout the production process since the Norwegian company wants to offer its consumers only excellent, carefully packaged products.



The new bottling and packaging line supplied by SMI runs at a rate of 25,200 bph and includes a Smiform ECOBLOC® 14-78-14 LG-VMAG integrated stretch-blow moulding, filling/capping system, a Smiflexi SK 802 F shrinkwrapper model, a Smipal automatic palletizer system APS 3080 P and Smiline conveyor belts that handle the bottles and packs inside the production line.

This facility also includes complementary machines and equipment, made by SMI leading partners, ensuring efficient and smooth operation of the whole system.



The primary objective of devising and designing the new soft drinks bottling line was the quality of Macks Ølbryggeri's final product, by

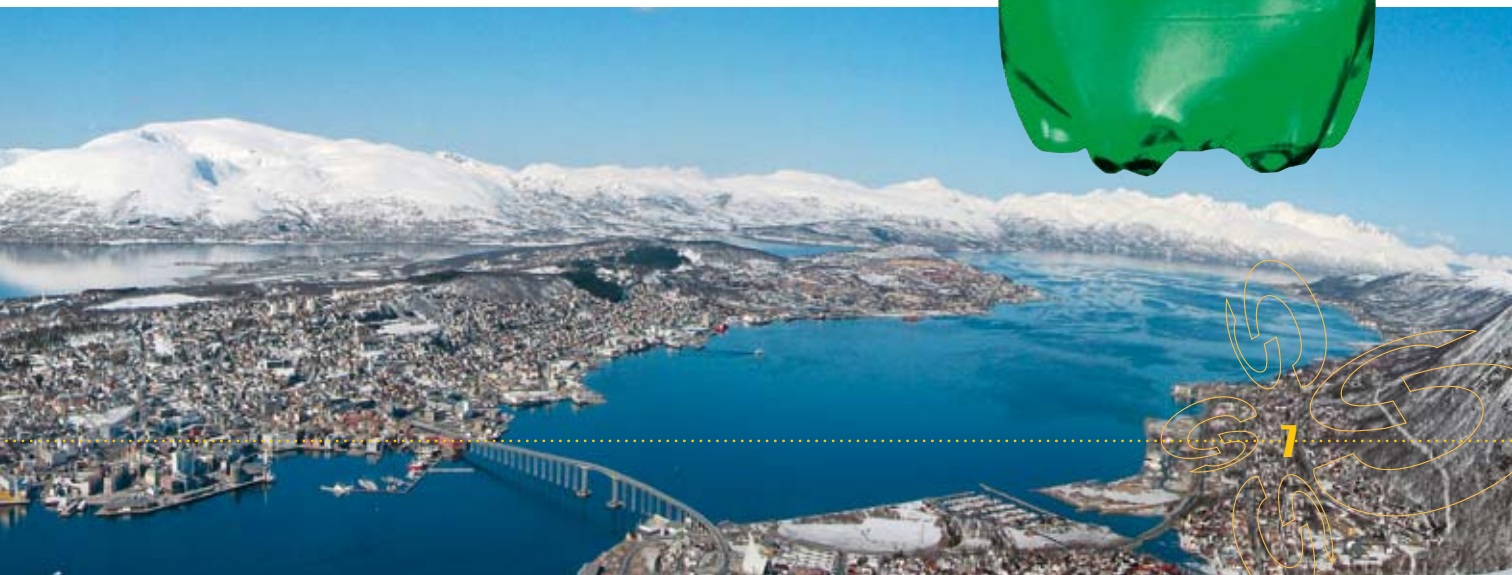


implementing a series of innovative solutions to effectively meet the demands of efficiency and flexibility expressed by the customer.

The production unit is sized to provide an hourly output of 25,200 bph and can be used to bottle multiple types of carbonated beverages into 0.5 litre and 1.5 litre containers.

The aim set by Macks Ølbryggeri to SMI for this supply was fully achieved, as the new line has a lower TCO (Total Cost of Ownership) than that of a conventional system of equivalent capacity, thanks to the machines' greater degree of efficiency, the optimization of the flow of materials used and a wide operative flexibility that allows the company to easily adjust the output to market demands.

Smiform's compact ECOBLOC® 14-78-14 LG-VMAG integrated system is the "heart" of the Nordkjosbotn



system because, by concentrating the stretch-blow moulding, filling/capping functions in a single machine, it allows them to save energy, cut maintenance costs and protect the environment.

The special attention this Norwegian company pays to the absolute quality of its products is also emphasized by the presence, in the new 25,200 bph system supplied by SMI, of a series of systems that control the containers and monitor the production line, as well as systems that inspect the raw materials used.

Among these, of particular importance is the system that checks the integrity of the PET preforms (before they enter the ECOBLOC® integrated system), checking their size, injection point and presence of any foreign matter on the bottom and on the walls of the preforms.



In addition, other automatic devices installed in different points of the line check for empty containers, filling level, correct application of caps and

weight of the cardboard blank or pack in order to ensure production batches absolutely free of imperfections or irregularities.



INSTALLATION / Macks Ølbryggeri

THE ADVANTAGES OF THE INTEGRATED SOLUTION



S miform's ECOBLOC® integrated system offers numerous economic benefits to the end user.

For example, thanks to this machine's modular and compact design (which combines in a single block the stretch-blow moulding, filling/capping modules), you can do without the connecting belts between blow moulder and filler and even, except in rare cases, the bottle rinsing machine.

This innovative solution also makes it possible to reduce the consumption of water and energy, maintain low running and maintenance costs,

safeguard the environment thanks to the use of eco-friendly technologies and benefit from an excellent price/quality ratio.

The stretch blow-moulding and filling modules of the ECOBLOC® system are designed according to criteria that favor the reduction of costs and consumption.

Among the innovative solutions with which these machines are equipped, the "Baseless" technology of the filling module is definitely one of the most important.

The feature of this constructive technology is the fact that the motors and transmission components

are placed in the upper part of the system, thus leaving the base completely empty.

This ensures ease of access to the filling carousel and utmost cleanliness of the area below the bottles, as well as the reduction of maintenance time, reduced use of water during the washing operations and, above all, an environment devoid of contamination.

Smiform's ECOBLOC® integrated system can also be equipped with accessory devices that further increase savings and benefits, such as the optional ARS device (Air Recovery System), which is available for the



LINE END FLEXIBILITY

SMI has paid special attention to designing the line end machines of the new Macks Ølbryggeri plant. In fact, the automatic APS 3080 P Smipal palletizing system was devised to respond effectively to the Norwegian company's logistics and distribution needs. Equipped with a dual motorized inlet, the palletizer installed at the Nordkjosbotn facility is able to handle both the half pallet and the whole pallet. The latter is created starting from the single packs arriving from the Smiflexi packers or two previously composed half pallets. The dual motorized inlet system, consisting of two dual rubber-coated cadencing devices and two layer pre-composition motorized conveyors, receives the packs from the SK 802 F shrinkwrapper, groups them in the layer pre-composition area and then palletizes them on half pallets. Then, a roller conveyor system brings the newly formed half pallets to the automatic two-arm rotary system that wraps the pallets in stretch film. Subsequently, a specific labeller applies an identification label to each half pallet to ensure its traceability throughout the distribution stages. At the end of this operation, two half pallets advance together on appropriate roller conveyors up to a robot that lifts and positions them on a "mother" pallet having the size of a Euro-pallet (which in turn is wrapped in stretch film and labelled). This line end packaging solution guarantees greatest operating flexibility to Macks Ølbryggeri. Once the Euro-pallet made up as described above reaches the mass retail point of sale, it can be easily opened and the two half pallets it contains are handled according to that moment's logistic requirements, even for different points of sale, thanks to the label that identifies each pallet. Furthermore, the half pallets can be used as a display unit inside the supermarkets, avoiding to have to remove the packages from the pallet and place them onto the shelves.



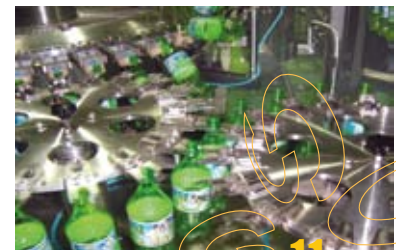
stretch blow-moulding module.

The aforesaid device saves up to 40% of the high pressure compressed air used in the PET bottles production process and up to 20% of energy needed to run the system.

The stretch-blow moulding, filling/capping modules integrated in an ECOBLOC® system are governed by a single automation and control system that allows the management of the system by only one line operator through a simple and user-friendly man-machine interface.

Smiform's ECOBLOC® integrated system greatly reduces the risk of contamination of the bottles on their way from the blow moulder to the filler; in fact, the passage of bottles between these two modules takes place by means of a star-star system enclosed inside a cavity, i.e. a hollow joining section with steel guards.

To further increase the separation of the "dry" area of the stretch blow-moulding module from the filling module's wet area, an overpressure airflow, obtained from the blow moulder's air recovery system, can be injected into the cavity.



MACKS ØLBRYGGERI: FROM POLE TO POLE

The Macks Ølbryggeri company, specifically AS L. Macks Ølbryggeri og mineralvannsfabrikk, was founded by Ludwig Markus Mack in 1877, a baker of Brunswick who, at the age of 35, gave birth to what would soon become the most industrial “business” of the Norwegian city of Tromsø. The first beer marketed by the company was “Potøl”, followed by the “Bayer” beer launched in 1878 during the Norwegian National Holiday (17 May). Then in 1883 came the “Bokøl” beer, whereas the company’s lager and pilsner beers were introduced in 1891. In 1895 the company experienced a significant expansion after starting the production of soft drinks and mineral water. From its very beginning, Macks Ølbryggeri’s beer had received wide acclaim among the population of Tromsø and surrounding areas thanks to its quality and unique taste. In 1910 the beer production division was united to that of the soft drink production, thus giving rise to a single business unit that took the name of “L. Macks Ølbryggeri & Mineralvandfabrik”. Further to the expansion and modernization of its systems, between 1920 and 1922, the company’s turnover quadrupled in a short time. In 1939 most of its facilities were destroyed by a fire but reconstruction was rapid, demonstrating once again this



INSTALLATION / Macks Ølbryggeri





Norwegian company's remarkable capacity for reorganization and development. Another important event in the history of Macks Ølbryggeri was the opening of a canning factory in 1946 for the production of many kinds of jams and marmalades; all products containing quality ingredients with a unique taste, as evidenced by the text on the labels: "fruits of the north, ripened in the glow of the midnight sun in the plains of northern Norway".

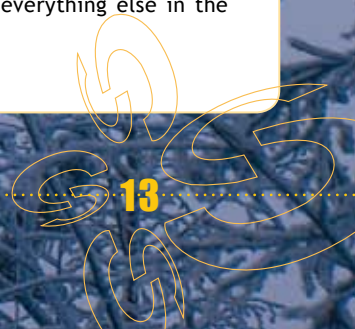


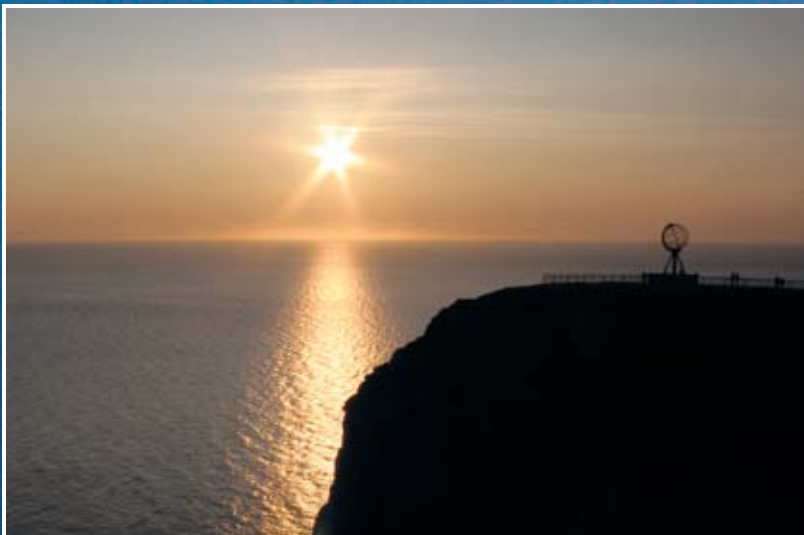
MACKS CHOOSES ECO-SUSTAINABILITY: A WINNING SOLUTION

For over 135 years the absolute quality of the product is one of the cornerstones of Macks Ølbryggeri's business, which is also very attentive to the impact its production facilities may have on the environment. Hence the choice of the Norwegian company to invest increasingly in innovative technologies that



allow company sustainable development and the preservation of the natural resources offered by the environment. Attention to these issues is reflected in the way all the product lines are managed, from beer to soft drinks bottled under license from Coca-Cola Drikker Norway (CCDN). Macks Ølbryggeri's entire production organization is based on sustainable development and works very hard to reach quality levels of excellence in full compliance with agreements with Coca-Cola. Moreover, in recent years great changes have affected internal and external logistics, backed by substantial investment both for the modernization of the production departments and staff training. But after 135 years of honorable business, the "historical" plants of the Norwegian company could not be further expanded and renovated, so Macks Ølbryggeri started looking for a new area that could accommodate a brand new production facility. This search lasted several years. After careful consideration, the choice fell on the Nordkjosbotn area, 70 km south-east of Tromsø. Construction work began in May 2011 and on 2 September 2012 the new 16,800 m² plant produced the first bottle while the company's administrative headquarters remained in the "historical" premises in Tromsø. Macks is now one of the most modern and "virtuous" companies of Norway, thanks to the use of plastic eco-friendly and recyclable bottles that reduce CO² emissions by one third compared to traditional ones. AS L. Macks Ølbryggeri og mineralvannsfabrikk employs a staff of 45 people and is still owned by the family of the founder, Ludwig. In fact, the current Managing Director, Harald Bredrup, belongs to the fifth Macks generation. Even the company "vision" has not changed and is still that of its origins: to provide high quality beer to every single consumer! Along with leading products, such as those with the Bayer, Bokøl and Mack Pilsner brand, others have joined the portfolio of the Norwegian company over the years. For this reasons it is said that "a lot has changed in Macks, but the quality remains excellent; simply excellent, as the Aurora Borealis, Northern Cape, the midnight sun and genuine like everything else in the North of Norway".





TROMSØ: THE GATEWAY TO THE NORTH POLE AND THE CITY OF THE AURORA BOREALIS

Tromsø is a fascinating city, located along the rugged coast of the north-western fjords of Norway, among a handful of islands with spectacular contours. Due to its position, it is considered the gateway to the North Pole and was chosen as the starting point for several Arctic expeditions. Tromsø lies mostly on the island of Tromsøya, connected to the mainland by a bridge and many tunnels. Despite being at the same latitude as Greenland, Tromsø is not covered by ice but enjoys a rather mild climate thanks to the gulf current that keeps the temperature of the waters of the Norwegian Sea above freezing. This city is nicknamed the “Paris of the North” for its liveliness, and is mostly visited for its natural beauty and the fact that here you can enjoy wonderful spectacles created by light and darkness. Tromsø is a unique place, characterized by very particular seasons that do not follow the traditional cycle but are linked to long periods of darkness that alternate with long periods of light. The polar night lasts 2 months, from November to January, while the period of the “Midnight Sun”, from mid-May to mid-July, is so called because the “gold disc” never sets during this season. Since 1989, a marathon is organized every year in the month of June under the midnight sun, which combines the breathtaking spectacle of the Aurora Borealis with the possibility of doing outdoor sports.



The region of "North-Norge"

Untouched nature, midnight sun, Aurora Borealis, high fjords, beautiful mountains, delightful fishing villages, timeless traditions: this, and much more, is Northern Norway. Northern Norway is the largest region of Norway by extension (175,246 km², equivalent to about one third of the whole country) and includes the territories of the Finnmark, Troms and Nordland counties. The coastline is characterized by numerous fjords and a myriad of islands and islets while the landscape becomes Alpine all along the border with Sweden: dense forests alternate with high mountains and expanses of snow. The Norwegian fjords are considered the landscape element symbol of Scandinavian countries; but what exactly is a fjord? It is a stretch of sea that creeps into the coast (up to several kilometers), flooding an ancient glacial or river valley and creating a magnificent natural spectacle. If the longest fjord in the world (350 km) is in Greenland, the Norwegian ones are in any case worthy to stand on a "podium". The longest fjord in Norway, and the second in the world, is the Sognefjord, which extends for 204 km near Bergen and that, surrounded by unspoiled nature, embraces spectacular mountains and stunning waterfalls on its long route.



❖ The Aurora Borealis

“One of the greatest and most beautiful natural phenomena, a magnificent spectacle with the right atmospheric conditions”: with these words, the Norwegian scientist Kristian Birkeland was the first to give the world a scientific explanation of this phenomenon at the end of the nineteenth century.

He discovered that the sun's rays follow the earth's magnetic field up to its magnetic poles when they collide with it, thereby creating the spectacular dance of light and colors famous worldwide.

In Norway you can see the Aurora Borealis anywhere, at least in theory. Obviously the best places are those of the northern regions, since the boundary of the Aurora Borealis touches the north of the country along the Lofoten Islands and continues along the coast to North Cape.

There is no exact time in which to enjoy this incredible spectacle but it should be noted that the phenomenon is more frequent in late autumn and at the beginning of spring because



during that time the climate is more humid and rarely snowy, and darkness falls around six o'clock in the afternoon.

❖ The midnight sun

The midnight sun is another, wonderful astronomical phenomenon typical of the polar regions. Scientifically, this phenomenon

is explained by the fact that, on approaching the summer solstice, the Sun never sets below the horizon (and thus night never falls) at latitudes over $66^{\circ}33'$ due to the tilting of the Earth's axis of rotation.

Scientific notes aside, witnessing this phenomenon is a magical and evocative experience, at times surreal, giving anyone unique and unrepeatable emotions.



THE WORD TO THE CUSTOMER

Interview with Roger Karlsen, Chief Operating Officer of AS L. Macks Ølbryggeri og mineralvannsfabrikk



Roger Karlsen,
Chief Operating
Officer of AS L.
Macks Ølbryggeri og
mineralvannsfabrikk

In 135 years many things have changed in Macks' business but the quality of your products has always remained excellent. What is the secret of this success?

"Macks' customers are very demanding and their expectations are very high in terms of quality and product performance. Therefore, the quality of the raw materials we use in the production of our beverages is essential, primarily

From right:

Harald Bredrup, Managing Director and CEO of Mack; Petter Nome, Director of Bryggeri og Drikkevareforeningen and Christian Ringnes, Real Estate Investor



that of water. We are the most northerly brewery in the world and fortunately we have natural, fresh, genuine and pure ingredients, among the best that the earth can offer.

Such an abundance of absolutely exceptional raw materials gives us quite an advantage on other beer-producing companies in terms of quality.

Today, one of Macks Ølbryggeri's main objectives is to start exporting to other countries so that many more consumers can try the exceptional quality of our products".

Macks Ølbryggeri has recently invested in the purchase of a whole new line, supplied by SMI, for the bottling of soft drinks in PET NR (Non Returnable) bottles. What do you ask your suppliers of bottling and packaging machines in terms of efficiency, flexibility and innovation?

"We rely heavily on a close and fruitful collaboration with our suppliers, because only by obtaining from them that which the company needs can we continue to be competitive in the market and offer high quality products much appreciated by our customers.

For example, the project that involved SMI as sole supplier concerned a new bottling line of PET NR bottles, which had to be able to cope with the entire output of the existing line of PET REF (Refillable) bottles and package them in the same formats.

For these reasons, we commissioned SMI to implement a system, the priority features of which were production efficiency, operative flexibility, ease of use and use of advanced technologies; all, of course, without giving up a cost/benefit ratio in line with our economic parameters".

Today, your company is the most modern and eco-friendly brewery in Norway; how important are aspects such as sustainable development and technologies that respect the environment for Macks Ølbryggeri?

"They are priority values of our company "vision", which is based on the responsible use of Mother Nature's resources.

In fact, only by respecting the environment can we continue to provide our customers high-quality, healthy and wholesome products, which safeguard the health of consumers and allow us to enjoy the trust of strategic partners such as Coca-Cola".

What role does environmental sustainability play in the beverages industry in general?

"The environmental sustainability of processes and productions is the basis for every decision we take at Macks Ølbryggeri in terms of new medium-to-long term investments.

In fact, the entire industry in which we operate will continue to grow and prosper only by adopting efficient and "smart" production systems, able to combine business needs with the protection of the territory and the preservation of vital natural resources such as water".

What role did SMI's collaboration have in the success of your new bottling line?

"In the new Nordkjosbotn plant we switched from PET REF to PET NR bottles; this not only involved a change in the packaging material but also an actual "cultural revolution" for our company and our customers. It was therefore necessary to rely on an experienced partner in this sector,

who was capable of providing us with all-around support to ensure that this important change could take place without too much inconvenience.

SMI has lived up to the task assigned to it, both when the line was designed and during the system's installation and start-up.

In the end, the close collaboration between the Macks Ølbryggeri and SMI staffs enabled us to successfully overcome the many challenges we had to face".



PROCORDIA

JUICE SECTOR

Procordia

Kumla, Sweden

Group: Orkla Group

- 14,400 BPH PET LINE
- Smiform ECOBLOC® 8-42-8 VMAG integrated system
- Smiline conveyer belts
- Smiflexi SK 350 T shrinkwrapper
- High pressure compressor



VIDEO



GEO LOCATION





Sweden: an unforgettable journey through the senses of taste, touch, smell and sight.

Sweden, as well as other Nordic countries, has a generous and unspoiled nature, offering exotic flavors in a contemporary way.

From the far North of the Arctic Circle to the fertile plains of the southern tip (over 1,500 km), this great Scandinavian country features completely different climatic regions characterized by a rich diversity of flora and fauna and unique culinary traditions that can count on first choice ingredients.

In Sweden, unconditional love for nature is seen and perceived everywhere, even in the industry.

Procordia, a leading company in the production, marketing and sale of a wide variety of foods and drinks, with brands among the best known and appreciated, clearly expresses this emotion and sums it up in this slogan: "our love for food & beverage will conquer the hearts of people", which is the basis of the company "vision".

This Scandinavian company has production units ranging from north to south in Sweden, which every day

produce a great variety of foods & beverages that enable consumers to rediscover the joy and pleasure of tasting genuine products with a unique flavor.

For example, in their facility in Kumla, a small town in southern Sweden called "the paradise of fruit and berries", Procordia achieves an excellent production of fruit juice-based beverages.

This is where the Swedish company recently installed a 14,400 bph production line, implemented by SMI, which includes a Smiform ECOBLOC® 8-42-8 VMAG model integrated system for stretch-blow moulding, filling/capping, a Smiflexi SK 350 T model shrinkwrapper and bottle handling conveyor belts.





LOVE FOR FOOD & BEVERAGES:

THE SECRET TO WIN PEOPLE'S HEARTS



The variety of foods and beverages produced by the Procordia plants is truly exceptional: meatballs, pizza, seafood products, frozen

potatoes, mashed potatoes, fresh pasta, ketchup, vegetables, sauces, beverages, snacks, jams and marmalades, cakes and a variety of ready meals: such a wide-ranging offer that allows this company's products to be present on the tables of millions of Swedes every time they get a chance to consume foods and beverages, whether at work, at school or even only at home.

Good food is obtained by paying great attention to the quality of raw materials, the genuineness of the meat and vegetables and the level of efficiency and hygiene of the packaging and distribution production processes.

This is why Procordia offers only first-rate products, since their consumption has a direct and indirect impact on the health and welfare of the Swedish population.

The company's aim is to be able to offer a wide variety of selected foods for any moment of the day (breakfast, snacks, lunch and dinner),



while maintaining priority attention to the environment and the quality of resources used, interacting with customers and suppliers to promote a responsible and sustainable company and safeguarding the territory in which it operates.



INVESTING IN THE ENVIRONMENT:
A CORPORATE PRIORITY AND
A SOCIAL NECESSITY.

The predominant factor of Procordia's company "vision" is to use resources as efficiently and responsibly as possible and, when feasible, reuse and recycle them; objectives that can only be reached using production processes and innovative technologies that allow maximizing resources, saving energy and protecting the environment. Furthermore, in the Swedish company's plants even packaging must be done responsibly, designed to meet the most stringent criteria of practicality, safety and eco-sustainability. The entire production cycle is continuously monitored to detect the water energy consumption, recycling of packaging materials and dioxin emissions to be able to check in real time energy efficiency level and environmental sustainability. Among a number of R&D projects on which Procordia is working, some are dedicated to reducing the packaging used in the packaging process. In these projects, the Swedish company works closely with its suppliers in order to jointly develop economically viable and eco-friendly solutions for use in its own production plants.

“ In Sweden, unconditional love for nature is seen and perceived everywhere, even in the industry. ”





To achieve this aim, Procordia continually invests in new production technologies and requires its suppliers of machines and systems to comply with its corporate values and share its policy of corporate social responsibility. The company's ultimate supreme goal

in all its activities is, in the end, the well-being of future generations to whom today's society must responsibly guarantee the ability to keep enjoying the good things in life and nature's beauties. The three "pillars" on which the work of Procordia stands are represented by simple but fundamental values





THE ORKLA GROUP

Procordia is part of the Norwegian Orkla ASA Group, a Nordic supplier of branded consumer goods and concept solutions to the grocery and out-of-home sectors; with a turnover of 30 billion NOK (Norwegian Kroner), approximately 3.7 billion Euros, and 28,000 employees. The Orkla Group holds several strong positions in India, Russia and Austria. Moreover, Orkla Food Ingredients is a major supplier to the European bakery market. In addition to Procordia Food, the Orkla Brands division includes many other major Northern European food companies such as Staburet, Bakers, Beavais, etc. The Orkla Group also operates through the Sapa division - specializing in solutions for the production of aluminium for the construction industry, systems of energy production from renewable sources, heat exchangers, etc. - and the Investments division - specializing in financial investment.



such as the direct relationship with nature, the love for high quality food and curiosity at its fullest, understood as the company's ability to innovate and embrace new recipes, tastes and products while always respecting the culinary traditions of Nordic countries.

Our plants



MODERN TECHNOLOGY

HELPS THE ENVIRONMENT

The installation of the new Smiform ECOBLOC® 8-42-8 VMAG integrated system at the Kumla plant is included among the projects of environmental responsibility of Procordia's company policy.

In fact, the main advantage of this compact stretch-blow moulding, filling/capping system is the absence of the bottle rinsing machine and

connecting belts between the blow moulder and the filler, which allows reducing electric energy consumption thanks to the fewer motors to be powered and also eliminating the consumption of water needed to rinse the bottles.

Besides, the integration of multiple machines in a single block guarantees lower running and maintenance costs compared to traditional solutions

based on separate machines.

Moreover, you can install the accessory ARS (Air Recovery System) device on the stretch blow-moulding module that allows you to save up to 40% of high pressure compressed air





used in the production process of PET bottles, and up to 20% of the energy required to run the system.

The air recovery system consists in two exhaust valves mounted on every single stretch blow-moulding station: the first valve introduces air into the recovery system tank while the second one discharges air that cannot be recycled.

This system allows a significant reduction of energy costs and a saving up to 40% in the consumption of high pressure compressed air, of which a part is recovered and reused to supply the pre-blow-moulding circuit at low pressure and the machine utilities circuit. In case the pre-blow-moulding or utilities circuits do not

exploit all the recovered air, excess air can be used to feed the low pressure line of the utilities on the outside of the machine.

Innovative solutions have been applied also to the filling module of Smiform's ECOBLOC® compact systems to limit water and energy consumption.

In fact, the filler is built according to "Baseless" technology dictates, which have the great advantage of significantly reducing the use of water to clean the system thanks to the fact that the area below the bottles is completely empty.

The motors and motion transmission equipment are located in the upper part of the machine.

This means that the base is free from moving mechanical components, i.e. great ease of access and cleaning of all parts of the system.

In addition to that, "Baseless" technology allows reducing maintenance and intervention time and costs, in addition to offering an environment devoid of contamination with a high level of hygiene.

The compact ECOBLOC® 8-42-8 VMAG integrated system installed at the Procordia production plant in Kumla blow-moulds, fills and caps two different types of 0.5 litre PET bottles, one 0.95 litre PET bottle and





one 1 litre PET bottle at the maximum speed of 14,400 bph; bottles are filled with numerous types of juice without pulp marketed under the BOB and Fun trademarks.

The 0.95 litre bottles were redesigned by SMI to come up with a container with a higher top-load value, therefore more resistant. More specifically, the "restyling" primarily involved the "shoulder" of the bottle while the bottle's body and bottom parts remained substantially the same.

The secondary packaging consists of the tray + film in the 4x3 collation packed by a Smiflexi SK 350 T model shrinkwrapper, which groups the PET bottles arriving from the ECOBLOC® 8-42-8 VMAG in packs of 12.

The 0.5 litre bottles are packaged in trays with smooth edges while the larger 0.95 litre and 1 litre bottles are packaged in trays with edges of different heights. In fact, Smiflexi's SK series shrinkwrappers are characterized by high operative flexibility since, with the same machine, many products can be packed in different



PROCORDIA: FROM THE ORIGINS UP TODAY

The story of Procordia began in 1838 when the founder of Abba, Christian Gerhard Ameln, started his business with fish and herring in Bergen, Norway. In 1848 the company Ekströms was founded in the Swedish city of Örebro by Henrich Ebergard Ekström, a food industry entrepreneur who was the first to launch chocolate bars on the Swedish market. In the next decades, this businessman's affairs were intertwined with those of three other brilliant entrepreneurs: Ragnar Wollin, Herbert Felix and Frank-Olof Jansson; all were innovators and each had a special ability in using local raw materials to develop new and delicious foodstuff: Wollin was the first to produce excellent wines, Felix "invented" ketchup, mashed potatoes and "Bostongurka" - a pickled cucumber sauce - while Jansson was successful with orange pumpkin. Each one founded his own production company, which then merged with Ekströms to give rise to what is now Procordia: innovative ideas, dedication to work and the efforts of those four great men to provide consumers with genuine food and practical solutions are values that are still at the base of the "mission" of this Swedish company. The company Frödinge was started in 1929 by dairy farmers and its famous cheesecake was born in 1955. On July 1, 2013, Procordia, Frödinge and Abba Seafood became one company, a result of Orkla's decision to strengthen the Orkla Group's competitiveness in the Swedish market. The new joint food company portfolio includes some of the most appetizing and tasty brands on the Swedish market and is an exciting workplace for some 1,400 people. The purpose of forming one joint company in Sweden is to create a stable platform for future growth and development of the three companies' brands. Procordia carefully prepares foods and beverages, paying the utmost attention to quality of ingredients, people's health and environmental sustainability of its production processes. The company owns several brands, very well known not only in Sweden, such as: Abba, Abba Middagsklart, Kalles, Frödinge, Felix, BOB, Ekströms, Risifruitti, Grandiosa, Önos, Mrs Cheng's, Kung Gustaf, Fun Light, Grebbestads, JOKK, Den Gamle Fabrik, Ejderns, Svennes, Hållö, Lucullus, Limfjord, Liva Energi and Paulúns. Procordia, the headquarters of which is located in the city of Eslöv, in the County of Skåne and only a few kilometers from the cities of Malmö and Lund, has a turnover of 4.8 billion SEK (Swedish Kronor), equivalent to about 548 million Euros; the production facilities are located not only in Eslöv but also in various Swedish locations: Fågelmara, Frödinge, Kumla, Kungshamn, Tollarp, Uddevalla (warehouse) Vansbro and Örebro.

pack configurations based on the specific characteristics of the product.

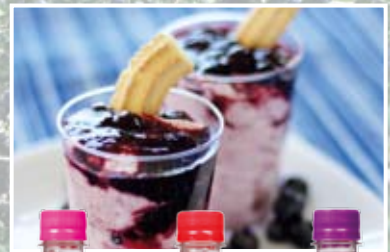
The fact that you can easily change the type of packaging means you can customize the appearance, size and "appeal" of the packages according to the customer's production or marketing requirements.





Kumla: the paradise of fruit and berries

Beverages made from fruit, fruit syrups, blueberry creams, fruit purees, juices... any product the basic ingredient of which is a fruit or a berry comes from the Procordia plant in Kumla. This is where Ekströms, Felix, Bob, Fun Light-branded food & beverages and many others are packaged, the main ingredient of which is fruit. In particular, the "Fun Light" product line is characterized by the continuous launch on the market of new products with innovative tastes, which often are created by unusual combinations of different types of fruit. With an annual consumption of around 60 million units, "Fun Light" is now the leading brand in Sweden in the fruit juice-based beverage sector and in the beverage field in general.



In Sweden, that with its 449,964 km² is the fifth largest country in Europe after Russia, Ukraine, France and Spain, nature prevails for the joy of all: in the north with its wild expanses, rushing rivers, alpine peaks and the plains of Swedish Lapland; in the south with its rolling countryside and endless beaches; in the east with its Baltic Sea coast and magical archipelago and in the west with its North Sea coast and great lakes.

Even in the big cities of Stockholm, Gothenburg and Malmö, lush nature is literally on the doorstep, while the environmental wonders of the Swedish Lapland, the mountains of Scandinavia, the coasts and the archipelagos are available to each and every visitor.

With 29 parks covering a total area of 7,316 km², Sweden is pretty much a huge national park.

The Sarek National Park, the first to be established in 1909 in Sweden and in Europe, is located in Swedish Lapland and, despite the wide green grasslands, is dominated by mountain ranges covering almost 90% of the

total area.

Even the National Park of Abisko dates back to 1909, located 195 km south of the Arctic Circle and that houses, from the beginning of the twentieth century, a permanent scientific research station.

The landscape of this area is truly breathtaking and when you reach the top of Mount Nuolja you can enjoy a splendid view on lake Tornesträsk.

The Aurora Borealis alone is worth the trip to Sweden, as well as the midnight sun, a phenomenon that occurs every year from late May to mid-July.

The Swedes have a special affinity with nature, so much so that it is common practice to spend their free time outdoors, pick mushrooms and berries, swim in lakes, relax with family and friends and enjoy a pristine environment: all eco-friendly activities, which also explain the unconditional love of these people for nature and the strong focus of the Swedes on issues such as ecology and the protection of the environment.

SWEDEN: NATURE LIVES HERE





PINAR SU

WATER SECTOR

Pinar Su Sanayi Ve Ticaret A.S.

Hendek - Sakarya, Turkey

Group: Yasar Group

- 6,000 BPH PET LINE:
- SmiformECOBLOC® 6-18-4HC VMAG integrated system
- Conveyor belts and Smiline divider DV 500
- Smiflexi SK 600 F Shrinkwrapper
- Smipal APS 3080 PR Palletizer
- Smipack HA 60 Handle applicator
- Control systems, rotary labeller, pallets wrapper, pallets labeller



GEO LOCATION



Pinar Su is the leading company in Turkey for the production of natural mineral water; since 1984, year in which this company was established, millions of consumers of different generations agree in considering Pinar water as the "Yasam Pinari", i.e. the source of life. This bottling company has developed over the years, basing its business on three essential and indispensable elements: health, taste and innovation. To preserve the qualities and mineral properties of water bottled at the source, Pinar Su uses only systems and machinery among the most modern and innovative in the world and continues to invest in new solutions for bottling and packaging its products. Among the latest projects implemented by Pinar Su, the one that stands out is the one that involved the manufacturing plant of Hendek, a city of 45,000 inhabitants in the province of Sakarya, a few kilometers from the



coast of the Black Sea. This is where the Turkish company decided to install a new bottling and packaging line of 6,000 bph for large capacity containers (3.25 litres, 5 litres and 10 litres). This production system, which is among the most modern, efficient and innovative on the market, was designed, built and installed by SMI. The beginning of the collaboration between SMI and Pinar Su dates back to 2005, when the latter purchased an automatic Smiflexi LSK 30 F model shrinkwrapper for shrink film packaging.



PINAR

THE SOURCE OF LIFE

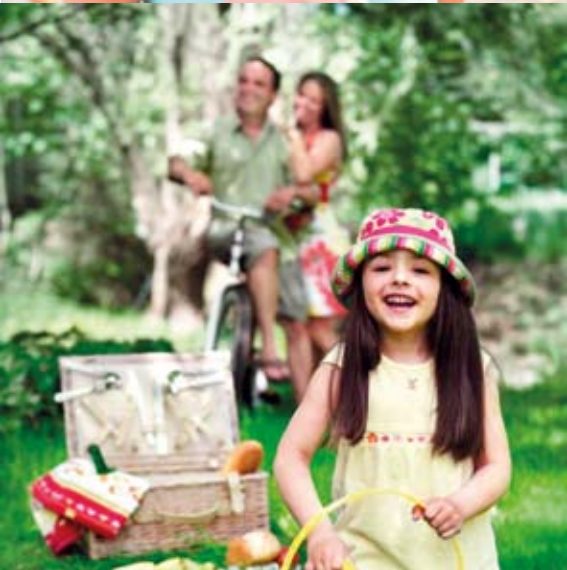
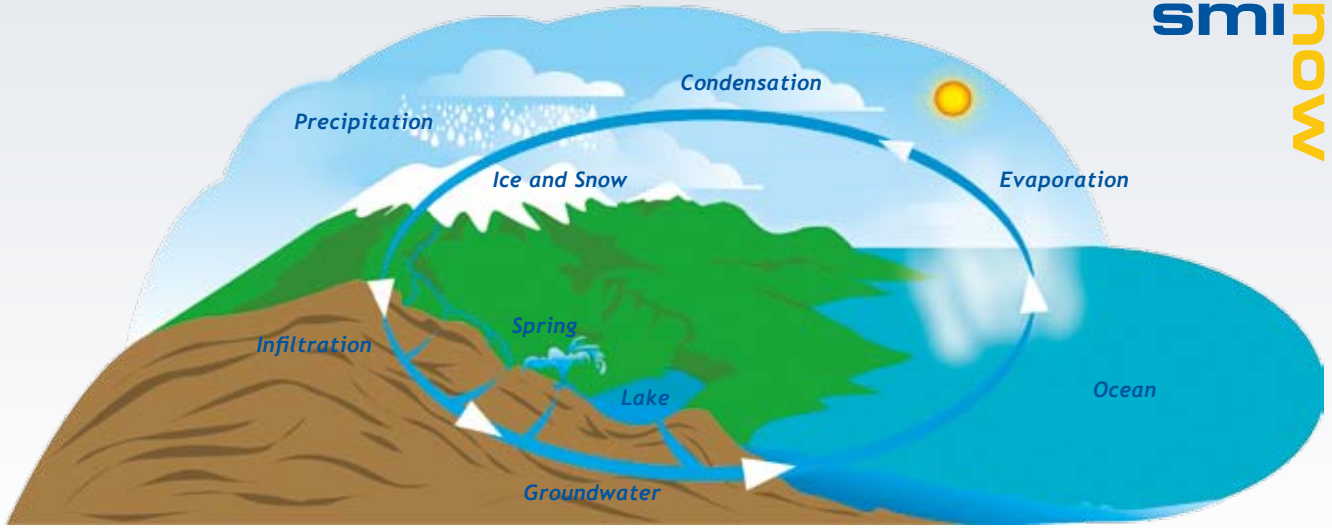
The decision of the Turkish company Pinar Su to entrust SMI with devising and implementing a "turnkey" bottling system stems from the need to be able to rely on the expertise and assistance of a single point of contact, capable of providing technical solutions quickly, to adapt the Hendek

production plant to changing market demands.

Needs that keep posing new challenges to water bottlers, who are forced to continuously adapt their production lines to customers' new tastes and trends.

To successfully handle these challenges, SMI offers its customers modular and integrated solutions for their bottling and packaging plants, providing only highly automated machines that rely on high operating efficiency, rapid format changeovers and cost-effective management (TCO - Total Cost of Ownership).



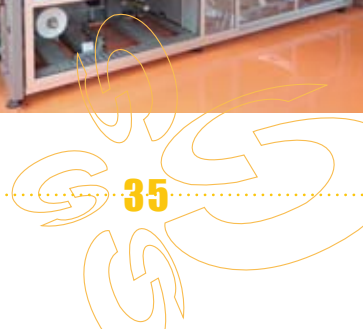


The latest generation technology proposed by SMI blends well with Pinar Su's imperative need to provide its customers with only highest quality products.

Quality that means perfection in production and distribution and support services throughout the territory in which the company's products are sold.

Pinar Su was the first company to bottle and market natural mineral water in Turkey.

Pinar Su water is bottled at the source in accordance with highest quality standards and is marketed in Turkey and abroad under the name "Pinar Yasam Pinarim", which means "Pinar: my source of life".



The natural sources of Pinar water are located in three different areas in Turkey, unpolluted and far away from industrial or highly urbanized places. The bottling plants of Bozdogan (Aydin province), Egridir (Isparta province) and Hendek (Sakarya province) feature latest generation technologies for the bottling and packaging of pure spring water.

For example, the filling operations take place in hygienically perfect environments and the water is subjected to continuous chemical, physical and microbiological controls to test its quality during the various stages of the production process.

The Hendek plant has an annual production capacity of 607,000 tons, and bottles the Pinar natural water in 0.33 litre, 0.5 litre, 1 litre, 3 litre, 5 litre and 10 litre PET containers. The choice to install an "ad hoc" line dedicated to large capacity containers was dictated by the sharp increase in sales of these collations, the marketing of which joined the already consolidated one of traditional bottles from 0.33 to 1 litres.

Pinar Su's success began in 1984, the year the Turkish company was founded, and was consolidated in the following years thanks to the expansion of the output and its product range, the strengthening of the sales and logistics network and its huge investments in new systems and machines.

Pinar source water is not only sold in Turkey but also in 26 foreign countries with a market share that keeps growing and with promising sales results in all segments where it operates.



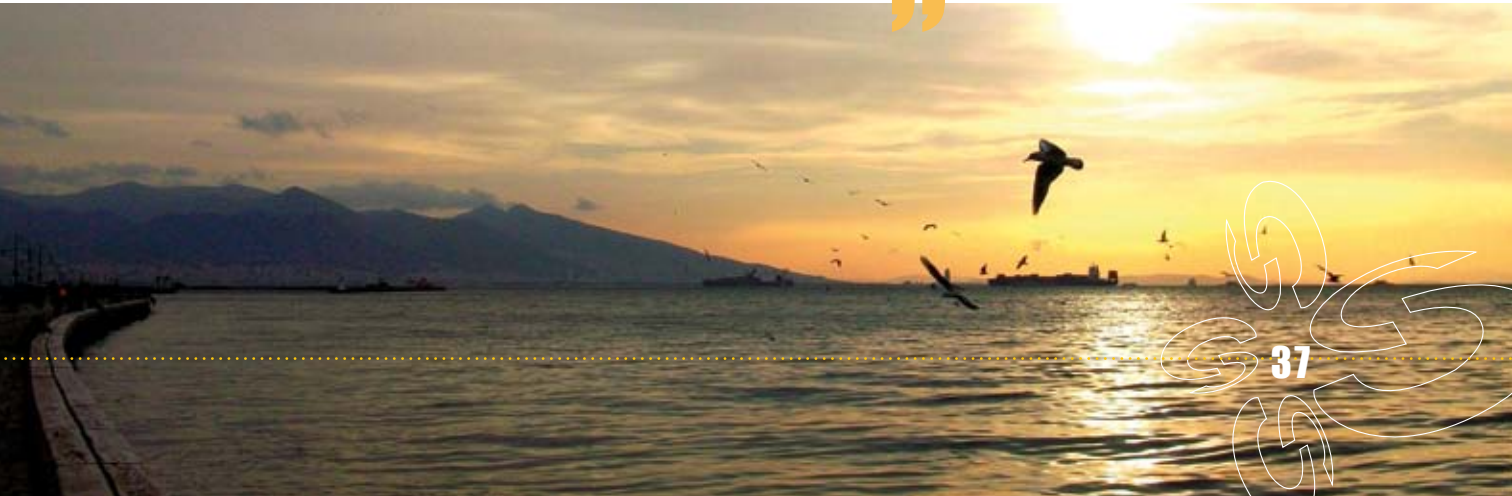


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During the 30-year history of this company, the bottling plants of the Madran, Gökçeada and Aksaağaç sources have been continually expanded and subjected to technological modernization, which have allowed Pinar water to be the first to achieve the TSE (Turkish Standard Institute) quality certificate among all bottled water in Turkey.

Perfection
in production
and service:
these are
Pinar Su
priorities

”



AN ESTABLISHED PARTNERSHIP

ESSENTIAL FOR THE SUCCESS OF A "TURNKEY" PROJECT



The optimal operation of a bottling plant as that of Pinar Su is made possible by cutting-edge production technologies and a highly efficient management of the flow of the materials used.

As such, the design of a production line requires a very accurate and detailed analysis of the technical, logistical and economical aspects associated with an investment of this magnitude.

In commissioning the new project to SMI, Pinar Su demanded special attention to the dynamics of the initial investment and operating costs of the new plant, with the overriding objective of achieving the maximum return in the shortest possible time from the new production facility.

All this, of course, without giving up essential aspects such as operative flexibility of the machines installed, reduced environmental impact of the industrial processes implemented



and advanced automation of the production cycles.

The "line engineering" project developed by SMI, taking into the utmost account the parameters specified by Pinar Su, has led to the creation of a new bottling plant for

natural mineral water of 6,000 bph. The "turnkey" line provided to the Turkish company for its Hendek plant includes a compact ECOBLOC® Smiform system for stretch-blow moulding, filling/capping of PET containers of large capacity (3.25 litres, 5 litres and 10 litres), a Smiline DV 500 divider, a Smiflexi SK 600 F model shrinkwrapper, a Smipack HA 60 handle applicator and a Smipal APS 3080 PR model automatic palletizing system.

The supply also comprises the connecting conveyors among the system's various machines and ancillary equipment such as a rotary labeller and a loop winder with airtight cycle for the protection of the pallets.

YASAR GROUP

Pinar Su is part of the Yasar Group, one of the largest industrial companies in Turkey.

Founded in 1945, today the Yasar Group consists of 20 companies, directly employs around 6,750 people and has leading brands in the food & beverage sector, such as Pinar, and in the coatings sector, such as Dyo.

This Group also works in the paper production, trade, tourism and services sectors, making a significant contribution to Turkey's economic development. Environmental protection stands out among Yasar Group's priorities: in fact, each and every activity of the companies part of this Group is conducted with great attention to the eco-sustainability of the production processes, saving resources and energy and the use of advanced technologies.



The bottled water market in Turkey

Driven by an increasing attention to health and physical well-being, Turkish consumers have boosted, in recent years, the demand for bottled natural mineral water that in 2011 reached a record 9.3 billion litres.

The per capita consumption, equal to 126 litres each year, is today very similar to that seen in major European countries, evidence of the high level of development and well-being that Turkish economy has now reached.



A WINNING SOLUTION:

INVESTING IN NEW TECHNOLOGIES

The advantages of an integrated solution for stretch-blow moulding, filling/capping operations:
ECOBLOC® 6-18-4 HC VMAG



S miform's integrated system installed in the facility of Pinar Su produces 3.25 litre and 5 litre PET containers at the speed of 6,000 bph and 10 litre containers at 4,200 bph.

The hourly output of the new plant fully meets this bottling company's needs, since with only one machine they can achieve the production capacity achieved previously by

using two linear blow moulders with relating filling/capping machines.

Therefore, from an economic point of view the ECOBLOC® solution proposed by SMI offers numerous benefits, seeing that: the machine's structure is modular and compact; the integration of multiple modules in a single block allows the elimination of the rinsing machine and the connecting belts between blow moulder and filler;

the fewer motors and mechanical components required, as compared to a traditional solution, reduce the consumption of energy and running & maintenance costs; the use of eco-friendly technologies allows the managing of industrial processes fully complying with the environment; the excellent quality/price ratio optimizes the initial investment.

Also, some optional energy saving

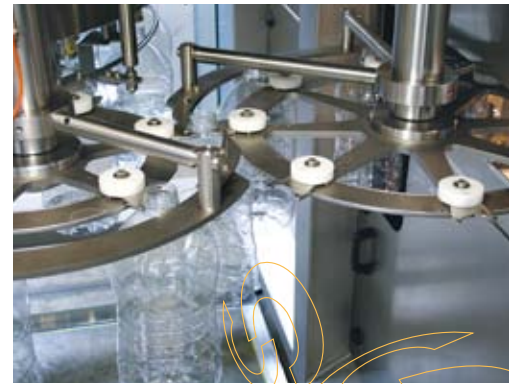
devices, such as the high pressure compressed air recovery system installed on the blow moulder, for example, further improve the efficiency of the entire bottling line.

Smiform's ECOBLOC® integrated systems use only filling technologies of the latest generation, which offer many advantages, including: fully electronic running of the filling cycle; high filling precision ($\pm 0.2\%$ compared to set point); selection of the filling parameters directly via the operator panel, according to product, container and speed; filling valves that feature great simplicity and high cleanliness; easy and quick format changeovers that do not require the replacement of mechanical parts.

 smiform



“ The hourly output of the new plant fully meets Pinar Su needs ”



LINE END

AUTOMATED AND “DUSTPROOF”

There is a Smiline DV50 model divider at Smiflexi SK 600 F shrinkwrapper inlet that sorts containers with a square base; this divider receives bulk products in single row, divides them over multiple rows and channels them into the secondary packaging machine to be packaged in shrink film only.

More specifically, the 3.25 litre bottles are grouped in the 2x1 and 3x1 collations while the 5 litre containers are grouped in the 2x1 collation and the 10 litre ones in the 1x1 collation. At SK 600 F shrinkwrapper outlet there is an automatic Smipack HA 60 handle applicator that applies a handle to the 2x1 and 3x1 packs of 3.25 litre bottles, while the larger packs containing the 5 and 10 litre bottles pass by without being “fitted with handles”.



The foregoing packages are then conveyed by Smiline belts to the inlet of the Smipal APS 3080 PR automatic palletizing system, that gathers them on 800x1200 mm and 1000x1200 mm Euro-pallets.

The palletizer installed by Pinar Su is a single-column system with two Cartesian axes with movements from the bottom.

The vertical axis is made up of a fixed column along which the horizontal beam slides on guides with recirculating ball bearings.

The horizontal working axis consists of the beam on which the gripper-holder arm slides on guides with recirculating ball bearings.

The gripping head picks up the layers of packs from a conveyor belt at





operator height and places them where required on the pallet with fast and accurate movements.

The beam's vertical movements and the horizontal ones of the head-holding arm are driven by brushless motors, which ensure perfect trajectories during all palletizing phases.

Besides, the APS 3080 PR system is equipped with a pads magazine and a pad-inserter for inserting the flat cardboard inter-pads between the pallet's layers.

The functionality of the Smipal palletizer is expanded by a device that allows the gripping head to rotate around its own vertical axis so as to achieve configurations that are not only orthogonal.

SMI's supply for end-of-line operations is completed by a loop winder with semi-airtight cycle that applies a special "dustproof" protection when the pallet is wrapped.

CUSTOM LABELS AND HANDLES

Pinar Su has chosen to label its mineral water bottles produced at the Hendek facility with reel-fed labels applied through hot glue by a machine manufactured by PE Labellers.

The labeling station is equipped with a servomotor, making it mechanically independent from the bottle carousel; this solution allows the automatic phasing of the machine with the label-application station, avoiding operator errors during format changeover. All operations are controlled by a PLC, which processes the work parameters set by the operator through a control panel or a touch-screen.

Pinar Su has also decided to equip the 5 and 10 litre PET containers with a specific plastic handle applied by a specific machine installed downstream of the PE rotary labeller.

Instead, the 3.25 litre bottles transit "idle" through the aforesaid machine but are then "fitted with a handle" by an automatic Smipack HA 60 model handle applicator, installed downstream of the Smiflexi SK 600 F shrinkwrapper that wraps them with shrink film in 2x1 and 3x1 collations.



WILMAR CONTINENTAL

EDIBLE OIL SECTOR

Wilmar Continental Edible Oil and Fats (Pty) Ltd

Randfontein, South Africa

Group: Wilmar International Limited

- Smiform ECOBLOC® 4-24-6 VMAS integrated system
- Smiflexi LCM 30 combined packer
- Smiline conveyor belts



GEO LOCATION



Wilmar Continental Edible Oil was founded in 2011 from a joint venture between Wilmar International Limited, Asian group leader in the agri-food industry founded in 1991 in Singapore, and Continental Oil Mills (Pty) Limited, one of the major South African industrial companies involved in the production of edible oil, the origins of which date back to 1968.

In that year, in fact, current CEO Abdul Kader Moosa started up his own company in the production and marketing of edible and cooking oil, drawing on the experience gained earlier in this field. In subsequent years, the founder's three sons - current Chief Executive Mohammad Ferouze, Operations Manager Fayyaz and Sales & Marketing Manager Asif, joined their father in the management of Continental Oil Mills (Pty) Limited.



The company is well known throughout South Africa for the Excella, S'Lite, Pan and Canola oil brands and for the Conti mayonnaise, which are sold in retail stores and mass retail supermarkets.

Since the Moosa family has always been at the forefront in driving the evolution of the edible oil production industry, it has been investing heavily to equip its factories with the most modern systems ever since it started the business.





AGAIN RELIES ON THE EXPERIENCE OF SMI TO FACE THE GROWING MARKET

Less than a year into the modernization project of the oil PET line in the plant in Randfontein, about 30 km from Johannesburg, Wilmar Continental Oil has renewed its partnership with SMI for

a new PET line for the 2-liter formats. In fact, even before completing the installation of the Smiflexi LWP 25 wrap-around case packer, the APS 3000 automatic palletizer and the Smiline conveyor belts for the expansion of the

Below:

Asif Moosa (in the middle), Wilmar Sales & Marketing Manager, with Belinda Nieuwoudt, Wilmar Marketing Manager, and Floh Thiele, Caltech Agencies Sales & Marketing Manager



INSTALLATION / Wilmar Continental

existing packaging plant for 350 ml and 500 ml bottles, new negotiations had already been entered between the two companies for the supply of a new "turnkey" line. In order to meet the growing market demand, Wilmar Continental Oil decided to invest in a new Smiform ECOBLOC® 4-24-6 VMAS integrated system for the stretch blow-moulding, filling and capping of up to 6,000 bottles per hour of 2-liter PET containers and a Smiflexi combined packer of the LCM 30 series for the secondary packaging of said bottles in wrap-around boxes, tray+film, and pad+film.

The South African company is one of the leading domestic producers of sunflower seed oil and mixed seed oil and, thanks to recent investments in SMI's latest generation packaging technologies, its production facilities are among the most modern and advanced throughout the African continent.



CM AND LCM COMBINED PACKERS: THE IDEAL SOLUTION FOR EVERY PACKAGING NEED

As of today, food & beverage producers can respond effectively and quickly to changes imposed by new market trends, focusing on a complete and fully automated secondary packaging system: SMI's combined packers.

In fact, the CM and LCM series of the Smiflexi division include, in a single machine, the functions of a wrap-around case packer, a trayformer and a shrinkwrapper, allowing you to pack a variety of containers in a wide range of final packaging solutions without having to invest in different packaging machines.

All Smiflexi models of the LCM and CM series are designed to ensure the user maximum flexibility and versatility and achieve, with a single system, high quality packaging in film only (only CM), tray+film, pad+film, tray only and completely or partially closed cardboard boxes at the max production speed of 80 packages/minute.

When the processing program is set to package in tray only or wrap-around boxes, the machine control system automatically deactivates the shrink tunnel and the film-wrapping system.

The LCM and CM series machines are particularly suitable for packaging systems that frequently switch from one product to another or from one format to another, and can easily be adapted to future production requirements dictated by the marketing strategies of "food & beverage" producers.

SMI's oil bottling solutions

Smiform's integrated stretch-blow moulding, filling and capping systems of the ECOBLOC® VMAS series are the ideal solution for bottling edible oil, for outputs up to 36,000 bottles per hour, since it uses an extremely accurate electronic filling system equipped with mass flow meters based on the Coriolis principle.

This system is able to "count" the amount of product that passes through the valve's feeding tube and transmit this info in the form of pulses to the machine control system. Filling stops on reaching the set number of pulses.

The filling valve is opened by means of a pneumatic solenoid valve, controlled by the bottle-presence signal, and the signal from the mass flow meter. The amount of product to be bottled is set through the operator panel.

Filling is carried out without contact between valve and bottle, ensuring high standards of hygiene and cleanliness throughout the process.

THE FIRST ECOBLOC

INSTALLED IN SOUTH AFRICA COULD NOT MISS PROPAK AFRICA 2013



Before installation at the Wilmar Continental Oil plant of Randfontein, Smiform's new ECOBLOC® 4-24-6 VMAS integrated system was exhibited at Propak Africa 2013, from 12 to 15 March 2013, where many visitors were able to take a look at the system and appreciate its benefits and potential. Thanks to this customer's availability, ECOBLOC® was able to make a stop at this important event, which is the main showcase for the packaging, food processing and labeling industry of SubSaharan Africa.

This was SMI's first direct participation in this fair, where a stand was set up in collaboration with its local representative Caltech Technologies. Needless to say, the Smiform ECOBLOC® system exhibited at Johannesburg was one of the event's major attractions. Visitors particularly appreciated its advantages in terms of compactness, versatility and energy saving as compared to the traditional solutions that feature multiple separate units (blow moulder, filler and capper) to perform the same functions.



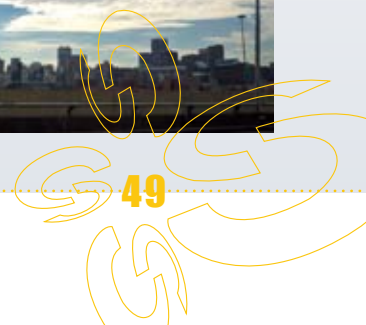
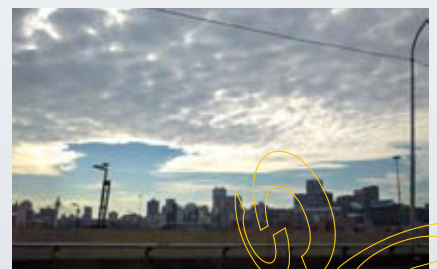
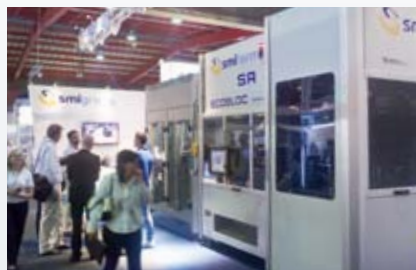
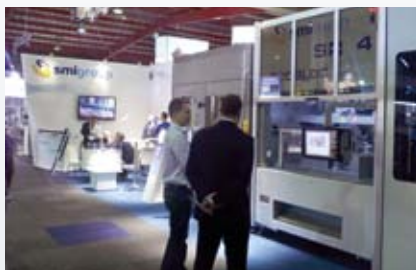
INSTALLATION / Wilmar Continental



PROPAK AFRICA 2013

PACKAGING • PROCESSING • PRINTING • PLASTICS

The Packaging, Food Processing, Printing, Plastics & Labelling Exhibition



THE WORD TO THE CUSTOMER

Interview with Asif Moosa, Sales & Marketing Manager, Wilmar Continental Edible Oil & Fats



After one year from the first project, Wilmar Continental Oil has once again relied on SMI's experience for the supply of a compact ECOBLOC® system, a combined LCM packer and conveyor belts. Which factors prompted you to invest in these new machines?

"The new investment is part of a multiannual plan of continued expansion of our facilities and market

share, made possible by the strong demand for our Excella-branded "premium" edible oil, which we sell in 2-liter bottles, from the domestic market and also from neighboring countries. The decision to install the Smiform ECOBLOC® 4-24-6 VMAS integrated system in a new line is based on the advantages offered by this solution that allows us to produce the bottles directly inside the bottling plant. This technology

gives us greater independence, flexibility and high efficiency of the production cycles. Furthermore, the LCM 30 combined packer allows us to quickly meet market demands for new packages and new formats because this machine is able to pack our products both in bundles with film and in the most common wrap-around cardboard boxes, and also allows us to reduce costs and increase efficiency, with the benefit of being more competitive on the market".

What are the main factors that convinced you to renew your confidence in SMI technology?

"Thanks to the installation of a Smiflexi wrap-around case packer and a Smipal palletizer in our first bottling line, we got to know and appreciate the quality of SMI machines, as well as the company's efficient management of the project and our excellent return on the investment. Therefore, we felt that for the new bottling line, the ECOBLOC® integrated system and the line-end packaging solution proposed to us by SMI would be our ideal choice to quickly and smoothly reach the growth targets we had set."

The edible oil market in South Africa continues to grow. How is Wilmar Continental Oil responding to consumers' new demands?

“Currently, the market's greatest demand in this packaging sector is shrink film; this means our company has to meet an ever-increasing pace to increase efficiency and versatility of our systems, in order to be able to adequately respond to the changes in market trends. This led to the need for a very flexible, easily changeable production organization, in order to successfully accommodate the increasing demand for bottles of different capacities and packages of different sizes and formats and, finally, reduce the cost of the finished product”.



How important is it for Wilmar Continental Oil to invest in bottling and packaging latest generation technology?

“Despite ease of use and functionality are essential factors in the choice of packaging our products, we are aware that the appearance of the package will have more and more importance in the future. In fact, eye-catching graphics, which attract the attention of consumers and ensure high visibility to our brands on the market, is a marketing tool to take into due consideration. Hence the need to equip the company's production systems with modern, flexible, reliable and versatile machinery, which allow us to take advantage of all the development opportunities offered by the market”.

What role should suppliers have during this stage of rapid growth? What do you expect from your bottling and packaging machine suppliers?

“We expect innovative and at the same time reliable technologies, first-rate technical support and, of course, excellent quality/price ratio. In a period of rapid expansion like the current one, our trusted suppliers must work with us side by side to meet today's needs and plan tomorrow's success”.

How important is local and efficient sales support and after-sales service for Wilmar Continental Oil?

“It is undoubtedly an essential factor that we evaluate very carefully when choosing our trusted suppliers. Since our plants operate 24 hours a day 7 days a week, our line operators must be able to count on fast and effective local support in case of need at any time of the day or night. The after-sales service is essential to any long-term collaboration and counts for a lot on any future opportunity of expansion”.



ANTIGUA DISTILLERY

WATER SECTOR

Antigua Distillery Limited
St. John's, Antigua and Barbuda

- 7,200 BPH PET LINE:
- Smiform ECOBLOC® 4-28-6 LG-VMAG integrated system
 - Smiline conveyor belts
 - Smiflexi LSK 25 P Shrinkwrapper
 - Linear labeller, control systems, high pressure compressor



GEO LOCATION



The clean blue and rich-with-life sea, the white sand beaches, hibiscus, orchids, giant bamboos, coconut palms and the historic ruins of the Admiral Horatio Nelson naval base: these are some of the attractions that have earned Antigua the nickname “jewel of the Lesser Antilles”. But the island of Antigua, named like this by Christopher Columbus in honor of Santa Maria de la Antigua (the Virgin he venerated in the cathedral of Seville), surprises also for its modern and industrialized side. A striking example of modernity, advanced technology and economic development is represented by Antigua Distillery Limited, a leader in the production and marketing of beverages, whose company “vision” is based on comprehensive quality, understood as a fundamental objective to be pursued at all costs to meet the demands of an increasingly demanding market. Quality reached by combining old traditions with modern production technologies, as done recently by the Caribbean company to meet the strong demand for “Oasis Water”-branded mineral water and carbonated soft drinks.



In fact, Antigua Distillery turned to SMI experience and technology for devising the “line engineering” and to implement a new 7,200 bph bottling and packaging line, which is characterized by compact dimensions, operative flexibility and environmental compatibility.

From left:

Kristin Myers, Maintenance Manager of Antigua Distillery Ltd, with Roberto Cavagnis, Sales Area Manager of SMI, and Giovanni Milesi, Project Manager of SMI.



ANTIGUA DISTILLERY

FROM LEADER IN THE PRODUCTION OF RUM...

The island of Antigua has a long history in the production and marketing of Rum.

The delicacy and singularity of the elegant taste of this liqueur depend on the sugar grown in Antigua, much sweeter than that grown in the neighboring islands.

At the beginning of the nineteenth century the island's production of rum was mainly for domestic use until, in 1932, a group of Portuguese traders decided to found Antigua Distillery Ltd.

Using only local capital, they bought new estates and a small sugar factory, which provided the key ingredient for the direct production of the molasses syrup (essential to impart a unique and tasty flavor to liqueurs).

They then began to produce aged rum on a wider scale called "Caballero Rum" and the first bottled rum called "Cavalier Muscovado", the latter aged for two years inside oak barrels to give it a special unique taste.

In the 60s, consumer preferences began moving towards lighter-build

liqueurs; to meet that change, Antigua Distillery modified the distillation process of its plants and began producing the lighter "Rum Cavalier Antigua".

Today the Caribbean company boasts a very diverse range of products with brands of international success as "The English Harbour Extra Old Rum", widely used to prepare cocktails like the famous "mojito" and has received numerous golden awards in the aged rums category.



ANTIGUA: THE ISLAND WITH 365 BEACHES

A former British colony, Antigua is known as the island with 365 beaches: "one for every day of the year", as the locals say. Quiet and almost unknown is Barbuda, only 40 km north of Antigua, considered its younger sister and authentic temple of virgin beauty. Here you can enjoy an enveloping peace, interrupted only by the lapping of the water and the singing of the birds. Above, the nuances of a pastel blue sky and the swirl of colors of its lush vegetation give you the feeling of being part of a corner of paradise. The island of Antigua still retains a traditional character, especially in some of Saint John's neighborhoods outside of the tourist resorts. The architecture is very lively and music accompanies the moments of daily life to the rhythm of reggae and calypso played by the local bands that use improvised percussion instruments made from oil barrels. To make the atmosphere of Antigua even more magical are the old stone windmills, which now symbolize the island and are scattered in large numbers among the abandoned sugar cane plantations, as the old mills of "Betty's Hope" plantation with its small museum.



The use of high quality ingredients and advanced technologies enable the company to obtain excellent products at competitive prices, without giving up the traditional methods that have always been used in the distillation of the island's rum.



...TO LEADER IN THE PRODUCTION OF BEVERAGES

Antigua Distillery does not just mean rum production; this company is also the market leader in the production and marketing of "Oasis Water"-branded soft drinks and mineral water, water that is filtered by means of a thorough process that preserves its purity.

Oasis water is also devoid of sodium and chlorine and, therefore, ideal for infant feeding.

Antigua Distillery's production process is in compliance with the highest quality standards defined by international water bottling associations, which also require the rigorous analysis of samples of all products at least once a year.

ST. JOHN'S: THE BEACH IS JUST THE BEGINNING!

Capital and commercial center of Antigua, this city has about 36,000 inhabitants, almost half the island's total population; tourism is mainly concentrated around two large complexes that overlook the harbor: the "Heritage Quay", cruise ship terminal and home to modern reception facilities, and the "Redcliffe Quay", the ancient seat of the slave trade and current citadel of wooden huts and old stone buildings that house shops, art galleries and restaurants. Among the main monuments stands the imposing Anglican Cathedral of Saint John's, dating back to 1681 that is the highest point of the city with its soaring spires. Another must in Saint John's is the picturesque town market which gives its best to the lively local population especially on Friday and on Saturday morning offering plenty of fruits, vegetables, crafts, t-shirts, souvenirs and spices of all kinds in a sensational swirl of colors and scents.

THE OBJECTIVES OF THE NEW PROJECT: COMPACTNESS, FLEXIBILITY AND ENERGY SAVING

The new bottling line commissioned to SMI by Antigua Distillery was devised and implemented using advanced technologies in terms of flexibility, reliability, efficiency and compactness; all extremely important factors to be able to easily adapt the company's production cycles to current and future needs. The "heart" of the new system is the Smiform ECOBLOC® 4-28-6 LG-VMAG integrated system, used for the blow-moulding of 0.35 litre, 0.65 litre and 1,5 litre PET bottles, for filling them with Oasis-branded natural mineral

water and for the final capping of the containers. Thanks to the fact that the system provided by SMI is able to bottle also carbonated liquid, the new production facility is already prepared to meet the planned expansion of activities of Antigua Distillery in the carbonated beverages segment (water and soft drinks), thus optimizing the return on capital invested and making the most of the system's potential. The production system of the new bottling and packaging line is fully automated and allows quick transitions from one container to another and from



one pack configuration to another; besides, the new facility handles both the "flat" and the "sport" cap. The design of the new PET containers took into account the functional, economic and image expectations of the customer. The new Oasis water PET bottles, made with low-weight preforms, are lightweight, strong and fully compatible with Antigua Distillery's environmental policy. In addition, all the preforms used for the production of the 0.35 litre, 0.65 litre and 1.5 litre bottles have the same type of PCO thread, thus allowing the switch from one format to another without the need to change the format of the bottle's neck. Major energy saving innovations were implemented in the new line, such as the heat recovery system installed on the shrink tunnel of the LSK 25 P Smiflexi shrinkwrapper. This system allows reusing some of the hot air generated by the heating elements inside the shrink tunnel. Through appropriate pipes, the hot air present in the pack's outlet area is fed back to tunnel inlet to be able to reuse it during the shrinking process and therefore reduce the generation of heat performed by the heating elements.



INSTALLATION / Antigua Distillery

HOW TO MAINTAIN EFFICIENCY AT HIGH LEVELS



The primary packaging of Antigua Distillery's Oasis mineral water in 0.35 litre, 0.65 litre and 1.5 litre PET bottles is performed by Smiform's stretch-blow moulding, filling/capping ECOBLOC® 4-28-8 LG-VMAG integrated system, while the secondary packaging in shrink film packs with and without flat cardboard pad is performed by a Smiflexi LSK 25 P model shrinkwrapper.



All the machines supplied by SMI for Antigua Distillery's bottling and packaging line are built with first-rate materials, which ensure operative reliability and durability, and are made with wear-resistant components that reduce cleaning and maintenance.





The system supplied to the Caribbean company also includes a linear labeller, the control systems and conveyor belts that handle the bulk containers and the packaged product; handling that occurs in a fluid, constant and precise manner thanks to the use of a latest generation line automation and control system, which ensures optimized production flows, easily adaptable to demand.

Line logistics solutions offered by SMI are characterized by:

- modular structure, compatible with a wide range of containers and packages of different sizes and shapes;
- minimized format changeover times, allowing you to quickly switch from one production to





- another;
- high operative reliability, thanks to AISI 304 stainless steel structures and components;
 - noise and friction levels among the lowest in the industry;
 - reduced time for cleaning and maintenance;
 - system start-up and running through simple and user-friendly steps;
 - ease of use, thanks to the POSYC operator panel with LCD touch-screen;
 - energy consumption and operating costs among the lowest in the market.

The use of sophisticated sensors throughout the production line also allows maximizing the working efficiency of all the system's machines and optimally manages any downtime or malfunction of any machine.



SMIGROUP INNOVATIONS MEET THE BEVERAGE AND “LIQUID FOOD” INDUSTRY

With an exhibition area of 132,000 square meters, the international Drinktec 'kermis', scheduled from 16 to 20 September 2013 at Munich's New Trade Fair Centre, is the most important international “showcase” for new technologies and latest innovations in the bottling industry. Since Drinktec is a worldwide meeting point for all operators of this sector, SMI chose this event to present the world première of its new solutions for the stretch-blow moulding of PET bottles, secondary packaging and line-end operations. These are newly designed bottling and packaging products, born from years of advanced research in SMI's R&D labs, characterized by low power consumption, high performance and quality/price ratio among the best in the market. The issue of economic and environmental sustainability of production processes has become an integral part of every strategic decision also in this area. In fact, “food & beverage” production companies require manufacturers of systems and machinery to come up with technical solutions increasingly in line with new development models. Therefore, also for the primary and secondary packaging sectors, efficiency and flexibility



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of industrial processes must be pursued that must be consistent with increasingly stringent parameters, for the optimal use of resources and energy saving of the production cycles, without forgetting the fundamental quality requirement of the end product.



smi
now

NEW HSR STRETCH- BLOW MOULDER

**A REVOLUTIONARY TECHNOLOGY THAT
WILL CHANGE THE PET WORLD**



SMI's response to the pressing demands of the beverage industry for faster, more efficient and reduced power consumption production systems now has a new name: the HSR (High-Speed Rotary) series.

It is a new range of truly innovative rotary stretch-blow moulders, which will change the PET container bottling world, a result of years of intensive research by SMI labs, that boasts absolutely revolutionary technical solutions compared to that available on the marketplace.

Moreover, the machine's compact and ergonomic design greatly simplifies running, cleaning and maintenance and allows the user to save valuable space inside the bottling line.

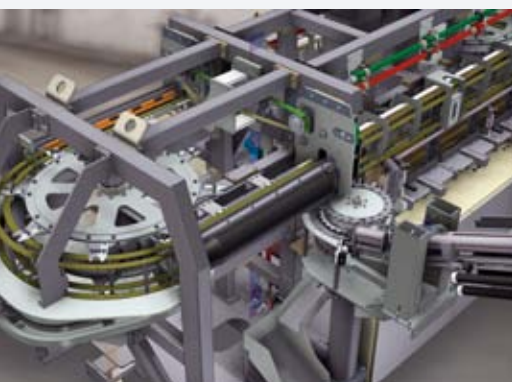
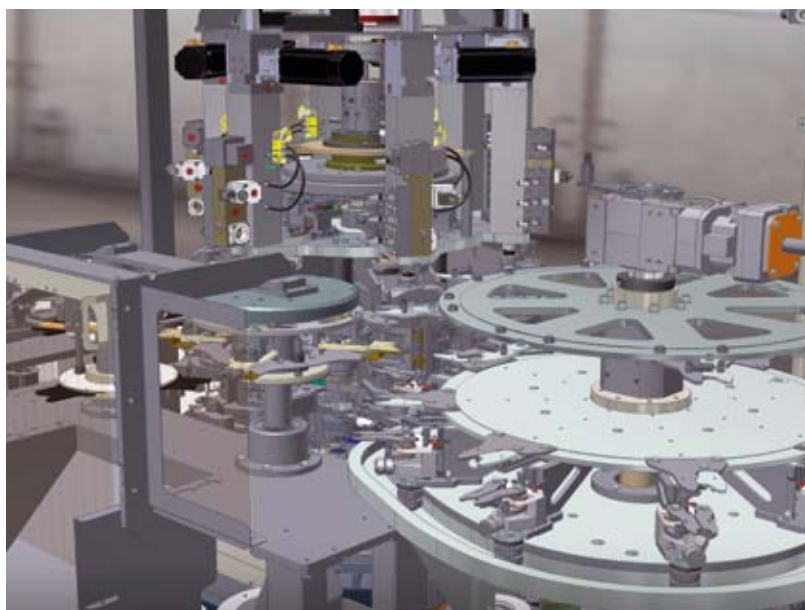
Smiform's new stretch-blow moulders can produce up to 2,500 bottles per hour per cavity (referring to 0.5-liter bottles), with an average decrease of 40% installed electric power and a power consumption energy saving of up to 30% compared to traditional solutions.



❖ Preforms heating module

The technological innovations on Smiform's new stretch-blow moulders cover all machine sections: preforms feeding, heating module, stretch-blow moulding stations, bottle unloading.

No detail was overlooked in the study and development of this revolutionary solid-looking and compact system, which runs silently and smoothly and features high and constant efficiency.



Certainly one of the most interesting technical aspects is represented by the innovative system for changing the pitch of the perform-holding mandrels, which is performed by means of a carbon fiber screw feeder both in the area in which the preforms are transferred from the heating module to the stretch-blow moulding stations (switch from 40 mm to 400 mm pitch) and in the mandrels' return area at cycle end (switch from 400 mm to 40 mm pitch).

This whole new system (SMI patent) allowed us to dramatically simplify the machine's mechanical components (cogwheels, grippers, etc.) all to the advantage of system operating efficiency and ease of cleaning and maintenance.

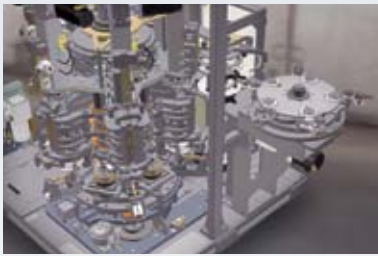
The new screw feeder-based system also allowed SMI to eliminate the mandrel-holding chain inside the heating module; this is an absolute innovation in the sector of stretch-blow moulding systems, which has allowed to considerably reduce the

mechanical stress the machine is subjected to.

In the heating module's exit area, the transfer of the preforms from the mandrels to the stretch-blow moulding stations and the finished bottles from the stretch-blow moulding stations to the unloading belt takes place directly through a single wheel that is fitted with grasping grippers, with undoubted advantages in terms of greater system efficiency, thanks to less machine jamming and downtime, less need for maintenance and less wear of mechanical components.

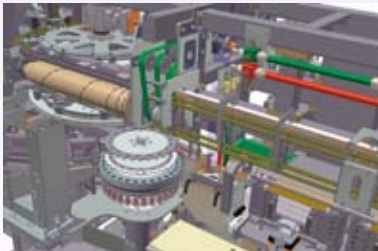
Great improvements have also been made in the preforms heating system, where an innovative thermodynamic reflection system allows high energy savings compared to conventional systems.

It is a system patented by SMI based on the combination between a removable front panel and a fixed counter-panel, both coated with gold powder to drastically increase their



panel and only one IR lamp on the counter-panel.

This means an average decrease of 40% installed electric power and a power consumption energy saving of up to 30% compared to conventional preforms heating systems, which require 10 or 11 IR lamps to achieve the same results.

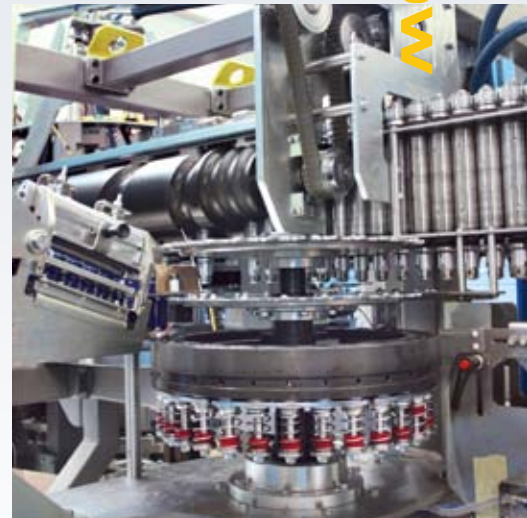


Each reflective panel is also equipped with a standalone ventilation system to optimize the heating of the preforms and its own hydraulic, electrical and mechanical connections for easy removal when replacing the lamps.

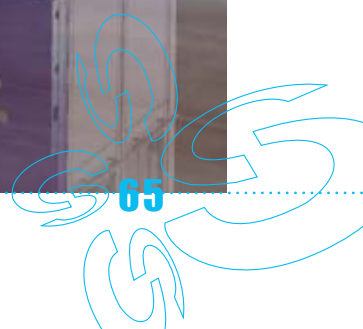
Thanks to the aforesaid innovations, the preforms heating system mounted on the new Smiform stretch-blow moulders of the HSR series allows the increase of the PET heating depth, optimal preform ventilation, greater longitudinal uniformity of the temperature profile and,

reflective properties.

Thanks to this cutting-edge solution, the optimal radial and longitudinal heating of the preforms is achieved by only 5 infrared lamps on the front



consequently, an opto-thermal performance of the entire process equal to 24.1%, well above the 10.5% achieved through conventional heating systems.



➤ **Stretch-blow moulding carousel**

Other advanced solutions on the new Smiform blow moulders of the HSR series include the preforms' pre-stretching, stretching and blow moulding lock mounted on the moulds.

Thanks to technology developed by Swiss company Seitz, the valves unit, the stretch rod and the blow-moulding piston are grouped in a single integrated module.

The most important innovation consists in the stretch rod motor drive that, being independent on

each stretch-blow moulding station, ensures high precision repeatability of operations and simplifies installation and maintenance for the operator (the new motorized system is guaranteed for 25 million cycles service-free).

Besides, all the settings of the downward profile of each stretch rod can be changed, thus guaranteeing maximum customization of the operating parameters.

SMI designers also introduced a number of important technical innovations within the stretch-blow moulding station, which have greatly simplified system running and allowed the elimination of some mechanical components.

For example, the movements of the bottom of the mould are activated by a mechanical lever and no longer by a cam, while the mould-holder



is opened and closed by means of a mechanical "toggle" system; and finally, the stretch rod's drive led to the elimination of the cam that moved it.

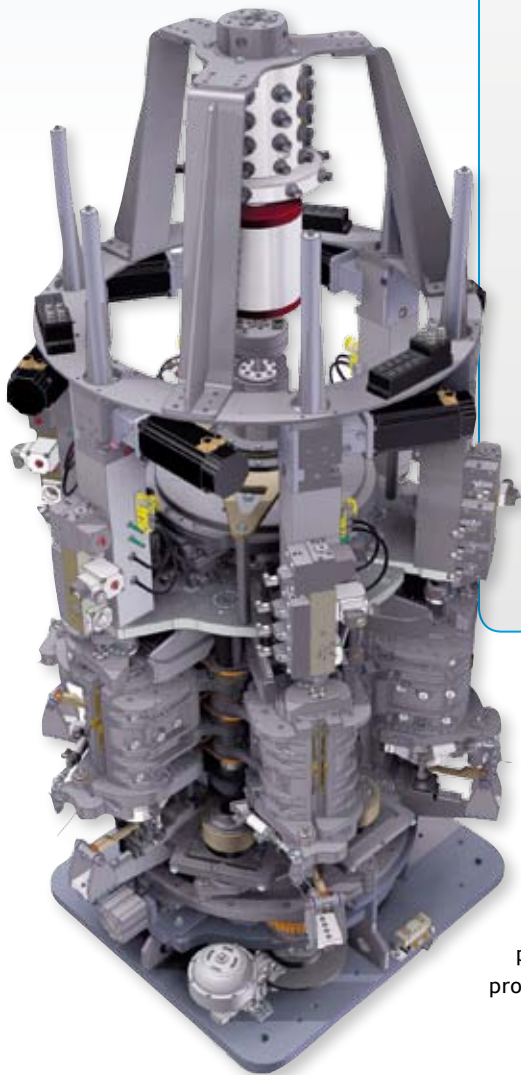
A special mention should be made on the technical solution adopted on the new Smiform blow moulders concerning the grippers that grip the



INNOVATION / Smiform

perform and release the bottle during the stretch-blow moulding process, which have been incorporated in the station's internal structure.

When the mould-holder opens to receive the preform from the heating module, the built-in gripper moves outwards, "captures" the preform arriving from the gripper mounted on the direct transfer wheel, re-enters its housing during the stretch-blow moulding operation and exits a second time during the cycle's final stage to deliver the finished bottle to the discharge wheel gripper.



MOTOR DRIVE AND MAN-MACHINE INTERFACE

The innovations of Smiform's new HSR series have also improved the ease of use and overall running of the machine.

For example, the control panel was integrated into the system's structure and a simple, user-friendly interface allows the operator easy control of all production operations, while also providing a full set of data in real time on machine running.

Furthermore, a single central motor transmits motion to the system's various mechanical components. Smiform's new stretch-blow moulders of the HSR series feature an automation and control system based on Sercos III fieldbus and Ethernet communication technology.



Therefore, thanks to this new system, the perform's neck remains firmly anchored to the grasping gripper during the bottle's entire production cycle, with unquestionable advantages in terms of stretch-blow moulding operation precision and perform neck protection.



For more information on the new HSR stretch-blow moulder, scan this QR code.



SMIFLEXI



The packaged beverage industry has never known such a strong and diversified development as in recent years.

The number of new products, flavors, containers, formats, flavorings, etc. that companies in this sector place on the market every year is huge and reflects new trends, new needs and new guidelines of the increasingly

vast range of consumers.

Such ferment imposes on the manufacturers of bottling and packaging machines and systems a considerable ability in responding to new demands and anticipating future trends, to be able to adjust their strategic choices and product range on time.

In addition to the quality of the

product, the marketing department of the "food & beverage" companies must pay close attention also to the characteristics of the package containing the product, since an appealing packaging, in pace with the times, safe and easy to use, is often a key element in the successful sale of a new product.

This is why container and package

designers must possess not only outstanding graphic skills but also a good knowledge of present and future market dynamics and consumer trends.

Therefore, product and package must match harmoniously and be targeted to the senses, feelings, tastes and expectations of each category of consumers, sending a message of exclusivity, positivity, happiness.

For these reasons, "food & beverage" companies are forced to frequently change the packaging solutions with which to market their products and, consequently, often change the production cycles and procedures within their packaging systems. Continuous production changes are only possible when using very flexible machinery, able to quickly switch from one format to another, easily

upgradable to new technologies and featuring low running and maintenance costs.

Smiflexi's range of automatic packers falls fully into this category and provides the end user all the technical and functional specifications required to manage production cycles efficiently and economically.

EASY LOAD

NEW DEVICE FOR CARDBOARDS MAGAZINE: AUTOMATIC LOADING AND GREATER SAFETY FOR THE OPERATOR

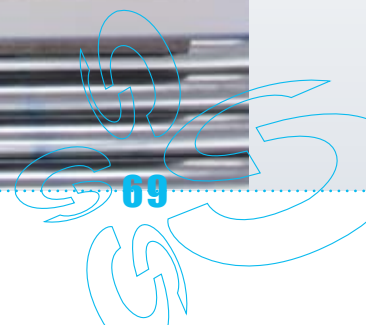


The main novelty SMI presented at Drinktec 2013 for the Smiflexi division is the innovative "Easy-Load" cardboard blanks magazine installed on a WP 500 wrap-around case packer.

The new device features considerable advantages from an operating and functional point of view.

The operator can easily load the cardboard blanks, stacked horizontally in uniform groups, because the feeding belt of the cardboard blanks magazine is positioned at the same working height as the packer's infeed belt, rather than under it.

Therefore, the innovative solution





devised by SMI eliminates the disadvantages related to the traditional loading of the cardboard blanks magazine, which force the operator to bend his/her body continuously to place the blanks in the bottom part of the machine.

Smiflexi's new "Easy-Load" magazine is available as an accessory both for the wrap-around case packers of the WP series (like the one on display at the Smigroup stand of Drinktec) and the SK series shrinkwrappers.

More in detail, the new system patented by SMI is made up of a series of conveyor belts, fitted with motorized rollers, which feed the packer's cardboard blanks magazine.

The cardboard blank stacks are carried on these belts up to the area in which they are translated and then continue up to the collection system at case packer infeed.

The operator just places the cardboard blank stacks on the outermost roller conveyor so that the automatic control system can



For more information on the new Easy Load device, scan this QR code.





FLUID AND CONSTANT PICKING WITH ANY TYPE OF CARDBOARD BLANK

In conventional systems, the operator manually loads the cardboard blanks into the magazine both at the beginning of the work cycle and each time the magazine empties. But now, with Smiflexi's "Easy-Load" solution, all the cardboard blanks are loaded into the magazine automatically with utmost precision, and the operator is free to perform other tasks. Moreover, with the innovative system devised by SMI designers, even the unloading of the cardboard blanks is done automatically, after processing a certain format, through a series of steps performed in reverse order as compared to the loading steps. The system that collects and compacts the cardboard blanks goes back up to reach the height of the shifting belt and places the stack of cardboard blanks onto it, which the operator can then manually unload from the machine without having to operate in the picker's area. The only manual adjustment, performed using appropriate cranks, must be carried out when switching to larger or smaller cardboard blanks as compared to those in the machine. The operator uses the crank to adjust the size of the pick-up and compaction system to the new format, so that the system will be ready to collect the new stacks of cardboard blanks that the operator had previously loaded on the feeding roller conveyors. The technology used in the Smiflexi "Easy-Load" magazine also features the great advantage of ensuring fluid and constant picking operations with a wide range of cardboard blanks having a thickness between 0.5 mm and 5 mm.



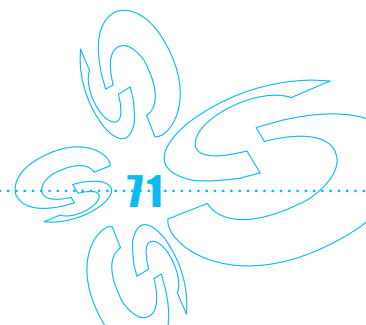
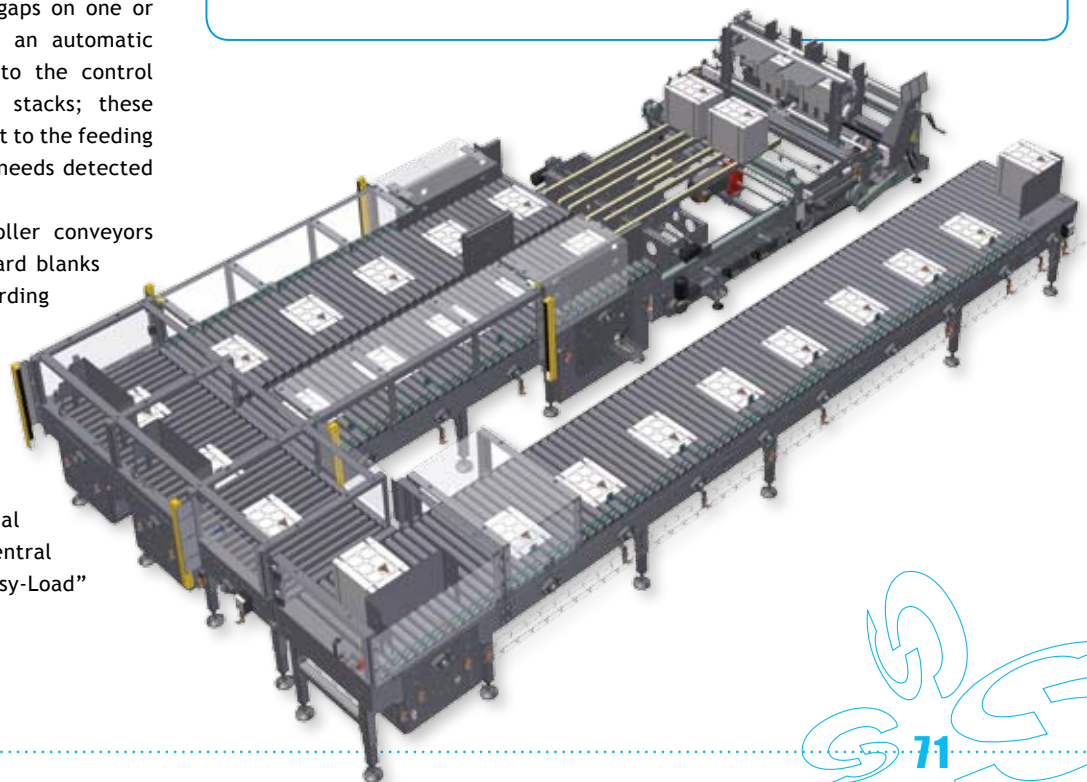
perform all the subsequent steps.

Thanks to specific sensors, the layout and feed of the cardboard blanks on the conveyor belts fitted with the motorized roller and their loading into the packer's magazine is, in fact, fully automated.

The new "Easy-Load" solution, designed and patented by SMI, works as a "booking" system that loads the blanks according to the needs of the production cycles.

For example, in a configuration in which blanks stacks are on two parallel feeding rows (necessary for working in two lanes), the sensors immediately fill any gaps on one or both rows by issuing an automatic "booking" command to the control system for the next stacks; these stacks will then be sent to the feeding row(s), based on the needs detected by the sensors.

The length of the roller conveyors that feed the cardboard blanks magazine varies according to machine model, since it depends on production speed. In any case, you can always increase the magazine's capacity by adding additional modules. The central section of the "Easy-Load"



module is made up of a system that transfers the stacks of cardboard blanks from the feeding belts to the machine's actual magazine. This section is fitted with a series of shifting belts that pick up the stacks of cardboard blanks from the feeding roller conveyors and carry them rapidly to a collection area. In this area, special side plates compact the blanks stacks, keep them in place and then lower them gradually for the next pick-up operation. The pick-up takes place by means of a group of suction cups that "pull out" the individual blanks from the bottom of the stack and place them on a group of chains that transfer them to the cardboard blanks ascent. From here, the blanks go up to the machine's main work surface for the packaging operations.



EVEN "AMERICAN" BOXES WITH SMIFLEXI WRAP-AROUND CASE PACKERS

Also included, among the countless customizations offered by the Smiflexi packers, is the packaging into corrugated boxes with top opening. This type of box, known in the industry as the "American box", is usually processed by case packers that use a system that erects the box and inserts the products, which differs from the wrap-around system used by the Smiflexi packers of the LWP, WP and CM series.

From today, SMI customers can also package their products in "American boxes" with top opening, without giving up the advantages of the wrap-around system.

This is made possible thanks to the extreme flexibility of Smiflexi case packers, in which you can also process a type of expressly designed cardboard blank that keeps the opening flaps in the upper part of the cardboard box.

Said cardboard box, erected as outlined above, can be easily opened from the top, maintaining the integrity of the package and avoiding products from falling out of it.

This solution is particularly appreciated by supermarkets and mass retailers as it allows them to display the entire open box on the shelf without having to remove the products one by one, since the consumer can easily take as many as he/she wants from the package.



APS 3100 LP PLUS PALLETIZER:

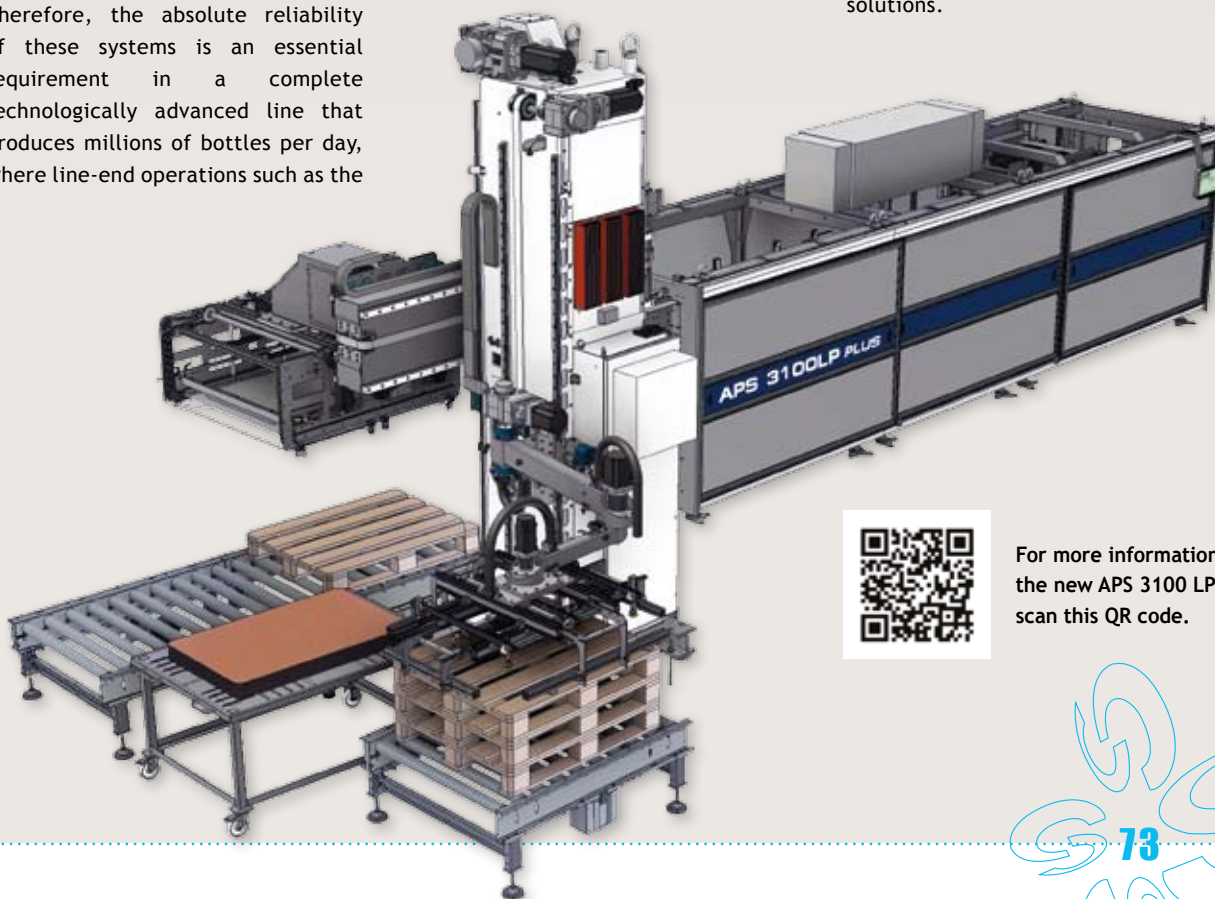
THE "3 IN 1" COMPACT SOLUTION

The overall efficiency of a bottling and packaging system also depends on the operational efficiency of the palletizers at the end of the line that must work perfectly to avoid "bottlenecks" during the production cycles.

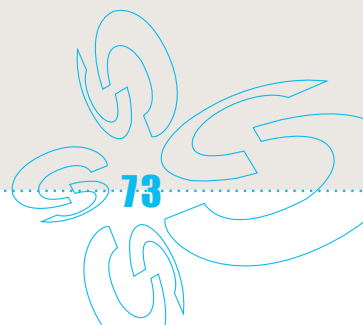
Therefore, the absolute reliability of these systems is an essential requirement in a complete technologically advanced line that produces millions of bottles per day, where line-end operations such as the

forming of the palletizing layers, the insertion of interlayers, the loading of the pallets, etc. must be perfectly synchronized with the running of the other machines.

Smipal, the SMI division specialized in the production of automatic palletizing systems, presents at Drinktec 2013 a series of innovations expressly developed to respond effectively to the demands of the food and beverage industry for advanced and reliable line-end solutions.



For more information on the new APS 3100 LP Plus, scan this QR code.





Smipal's APS 3100 LP Plus is a "3 in 1" system that had its world première at Drinktec in Munich.

This solution integrates, inside the central column's structure, the palletizing, empty pallets feeding and interlayer insertion steps, i.e. the three operations usually performed by separate machines inside their own dedicated space.

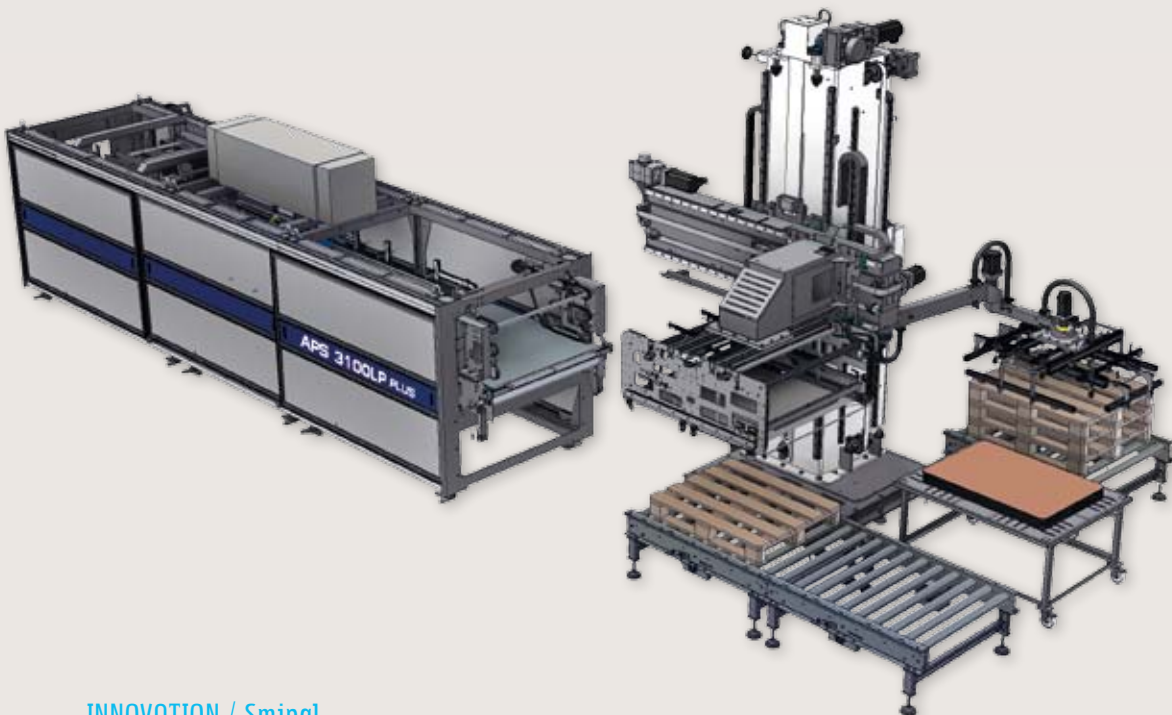
The integration of these three functions in the central column is made possible by a series of technical innovations devised by SMI designers. Specifically, the horizontal beam on which the layers loading head runs was fitted with a telescopic guides system that allows the beam to move faster on its transverse axis.

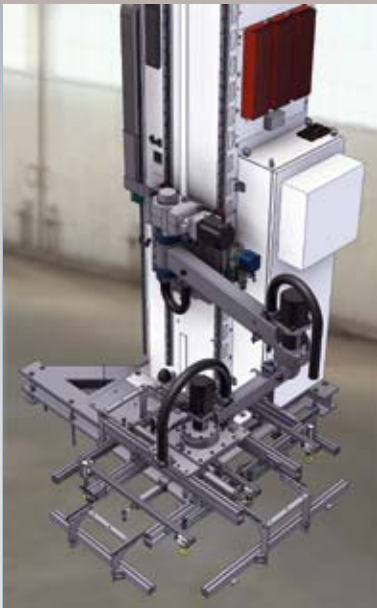
In this way, the side of the column that remains clear when the packages



are inserted into the loading head is exploited by the Smipal system to house the mechanical unit that manages the flow of pallets and the insertion of the interlayers.

This unit essentially consists of an articulated horizontal arm the far end of which is fitted with a gripper for grasping the pallets and a suction cups unit for handling the cardboard interlayers.





The arm moves both vertically, sliding on the central column to pick up and release the pallets and interlayers, and horizontally, to transfer the pallets and interlayers from their magazines to the palletizing pallet.

These operations are handled by the machine's automation and control system in perfect synch with the operations performed by the layer-loading head, so that the vertical and horizontal movements of the various mechanical units moving on the central column can follow precise and coordinated trajectories that prevent any contact or interference between them.

Smipal's APS 3100 LP Plus automatic palletizing system features all the advantages of Cartesian axes technology but with reduced machine overall dimensions compared to traditional solutions.



STREAMLINED AND COMPACT PALLETIZING LINE

The advanced technology used on the new APS 3100 LP Plus system allowed us to unify the three main palletizing functions in a single work center: picking up the empty pallets, overlapping the layers of packages and inserting the interlayers in between.

The integration of these operations within just a few mechanical units, all housed in the central column, substantially reduces the size and dimensions of the system and offers considerable advantages, compared to traditional palletizing systems made up of multiple standalone modules, as far as operating flexibility, work safety and machine maintenance are concerned.

In addition, the compact configuration of the APS 3100 LP Plus allows concentrating the use of forklifts, transpallets, etc. in a well-defined zone, optimizing the management of the loading and unloading areas.

In fact, since the pallets and interlayers are handled on the same side of the palletizer, this does not interfere with the other production activities. Thanks to its compact size, the new Smipal system can be easily installed even in bottling and packaging lines that have limited space at the end of the line.

The new APS 3100 LP Plus system is exhibited at Drinktec 2013 in a layout that includes thrust integration with a Smiflexi case packer model WP 500. This solution completely eliminates the connecting conveyors between the two machines and allows you to save on the initial investment and line-end running and maintenance costs.





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