

MALÉ WATER

BOTTLING IN PARADISE

The Maldives in a bottle

CM-R ERGON

THE FORMAT
CHANGE
REVOLUTION

APS 4140

MORE EFFICIENT
END OF LINE
WITH DOUBLE COLUMN
PALLETISER



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EDITORIAL 2023/27

Act quickly
to keep growing

The manufacturing industry is now required to act more and more quickly in sensing market changes, in order to take advantage of the opportunities they offer, without any hesitation.

For this reason, technological innovation must be placed at the service of business efficiency, creating faster, more flexible and eco-sustainable production plants.

These are worldwide trends, as evidenced by the case histories present in this issue of SMINOW, briefly described below, which invite you to read the articles dedicated to them, more extensively.

To meet the growing demand for bottled water in Egypt, Valley Water has invested in a new complete 36,000 bottles/hour line in PET which ensures efficient, sustainable and high quality production for the customer.

In China, the constant growth in water consumption has prompted the Huihuang United Food Co. company, an important bottler of leading brands such as Coca-Cola and C'estbon, to install an integrated blowing-filling-capping system ECOBLOC® ERGON, the first installed by SMI in China, intended for bottling large capacity containers in PET.

In the earthly paradise of the Maldives, the Malé Water company has once again relied on SMI for the packaging of the new bottles of ARO water, the brand that represents the "Maldives in a bottle".

All SMI innovations meet the needs of companies in the food & beverages sector to achieve efficient, flexible and eco-sustainable production.

The APS 4140 L ERGON double column palletiser and the innovative rotary system for quick format changeover in secondary packaging machines, are just some examples of the solutions proposed by SMI for a modern smart factory. More information about all the latest innovations can be found in the innovation and information sections of this issue.

Thank you and enjoy your reading.

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



sminow | magazine

Created by:

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

Valley Water - Huihuang United Food
Malé Water & Sewerage Company Pvt. Ltd.

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➤ **SECTOR: WATER**

VALLEY WATER

Wadi El Natrun, Egypt

COMPLETE 36.000 BPH LINE WHICH INCLUDES:

- Blowing-Filling-Capping System ECOBLOC® 16-78-18 E HEVF
- Case Packer WP 600 ERGON
- Palletiser APS 3070 L ERGON
- Conveyor belts and sub-supplies:
compressor, laser marker, level control, labeler, wrapper.



IN THE DESERT AREA OF WADI EL NATRUN, MORE OR LESS HALFWAY BETWEEN ALEXANDRIA AND CAIRO, YOU FIND YOURSELF IMMERSSED IN AN UNUSUAL, RURAL, AUTHENTIC EGYPT.

WADI EL NATRUN IS A DEPRESSION ABOUT 23 METERS BELOW SEA LEVEL, IT WAS IMPORTANT FOR THE ANCIENT EGYPTIANS WHO EXTRACTED THE "NATRUN", THE SALT USED IN MUMMIFICATION PROCESSES.

TODAY THIS AREA IS FAMOUS FOR THE EXTRACTION OF ELANO WATER, A 100% PURE AND NATURAL PRODUCT, BOTTLED BY THE VALLEY WATER COMPANY, FOUNDED WITH THE AIM OF PROVIDING THE MARKET WITH HIGH QUALITY PACKAGED WATER AND FILLING THE GAP BETWEEN STRONG DEMAND AND CURRENT LOW SUPPLY.

VALLEY WATER

IN THE NATRUN VALLEY, THE SMARTEST PET LINE INSTALLED BY SMI IN AFRICA

To increase the production of 0.6 L and 1.5 L PET bottles, the Egyptian company recently turned to SMI for the supply of a complete line of 36,000 bottles/hour, which is currently the smartest plant installed by SMI on the African continent and is the ideal solution to ensure efficient, sustainable and high quality production. Together with the new PET line, Valley Water has entrusted SMI with the modernisation and automation of the end of line of an existing parallel plant, characterised by the presence of a SMI stretch-blow moulder supplied in 2013, also intended for the production of 1.5 L and 0.6 L PET bottles for the packaging of Elano water.

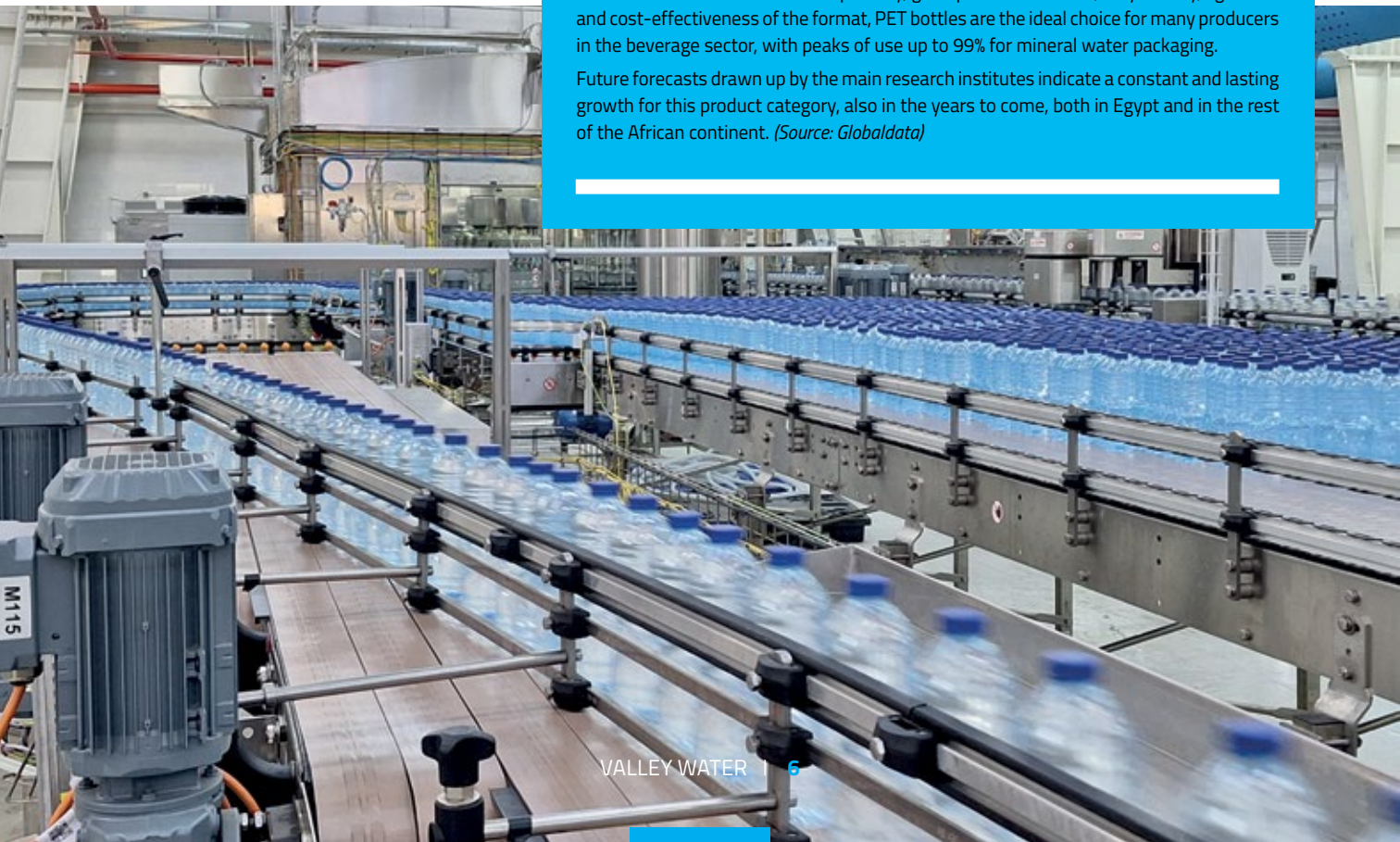
➤ THE BOTTLED WATER MARKET IN EGYPT

The bottled water sector in Egypt is characterised by the presence of multinational brands and a significant growth of "private labels".

Bottled water is one of the largest categories of soft drinks on the local market, so much so that in 2022 the annual consumption of this product grew by 4.3%, also thanks to the recovery of tourism after the restrictions imposed by the Covid-19 pandemic in previous years.

Thanks to features such as transparency, good protective barrier, recyclability, lightness and cost-effectiveness of the format, PET bottles are the ideal choice for many producers in the beverage sector, with peaks of use up to 99% for mineral water packaging.

Future forecasts drawn up by the main research institutes indicate a constant and lasting growth for this product category, also in the years to come, both in Egypt and in the rest of the African continent. (Source: Globaldata)





NOURISHMENT, QUALITY AND WELL-BEING FROM UNDERGROUND, THANKS TO INNOVATION

Elano water is extracted from wells in the subsoil of the western Egyptian desert of Wadi El Natrun, an area rich in minerals, natural salts and nutrients for the human body.

To preserve the quality of the water and offer consumers a pure, uncontaminated and healthy product, the Valley Water company pays great attention to every detail and invests in cutting-edge technologies

for every phase of the industrial process, from the extraction of the product from underground wells at a depth of 400 meters, to bottling and packaging operations on the surface.

The careful analysis of consumer expectations allows the Egyptian company to adapt its production facilities efficiently and quickly, in order to effectively meet the supply-demand dynamics of the market.

Valley Water adheres to international and

European standards for the health and quality of bottled water and invests in new technologies to meet the growing market demands, as well as for bottled water, also for carbonated and non-carbonated beverages, which, in terms of quality, compete with the main international brands. To this end, it constantly collaborates with international experts in the sector, implementing sophisticated control systems in its latest generation plants.



INVESTING IN NEW TECHNOLOGIES TO INCREASE EFFICIENCY AND PRODUCTION

The decision to rely on SMI for the supply of a new complete line of 36,000 bottles/hour for the bottling and packaging of Elano water in PET bottles ranging from 0.6 to 1.5 L is the result of a close collaboration between the two companies, in 2013 with the installation of a rotary stretch-blow moulder and a shrink wrapper from the LSK range, both are used for the packaging of 0.33 / 0.5 / 1.5 L containers in PET.

SMI supplied the Egyptian company with an LWP 30 ERGON case packer dedicated to packing at a speed of up to 30 packs/minute PET bottles of 0.33 and 0.6 L in wrap-around boxes in 4x5 and 1.5 L bottles in 3x4.

The end of line of this second supply was the subject of a modernisation process to automate palletising operations, thanks to

the installation of an SMI palletiser of the APS 1540 ERGON range, delivered to Valley Water together with the new 36,000 bph line.

The supply of the latter and the automation of the end-of-line of the pre-existing plant, allow the Wadi El Natrun plant to meet the growing demand for bottled water in Egypt, a market where there is one of the highest levels of consumption per capita of this product in the world and where consumers now tend to choose healthier drinks rather than sugary drinks.

The new technologies supplied by SMI ensure that Valley Water, not only have greater production capacity, but also improved market competitiveness, high energy savings and reduced environmental impact.



RESTYLING OF BOTTLES FOR BETTER PERFORMANCE

The main aspects considered by SMI designers for the Valley Water project were: on the one hand, the study of the line layout to ensure optimal use of space, high quality, production efficiency and plant flexibility; on the other hand, the analysis of the design of existing bottles, making the know-how acquired in the design of PET containers available to the customer.

Starting from the containers used by the customer and keeping the "core concept" unchanged, SMI's designers studied the restyling of the 0.6 and 1.5 L bottles, produced by the new ECOBLOC® integrated blowing-filling-capping system, aiming to emphasize the iconic image represented and to improve the resistance and stability of the containers.

These objectives have been punctually achieved by enlarging the maximum diameter of the bottles and lowering their height, with the result of optimising the center of gravity of the same.

The base of the bottle was also subject to a restyling process, with the aim of improving the mechanical properties of the containers during filling.

Thanks to these measures and the supply of new moulds for the stretch-blowing of 0.6 and 1.5 L bottles of Elano water, now also produced by the 6-cavity stretch-blow moulder supplied in 2013, the entire packaging and palletising process of the Wadi El Natrun plant has become more efficient and sustainable.



SMI SOLUTIONS

FOR VALLEY WATER



Consumer purchasing choices are also strongly influenced by environmental issues.



To demonstrate its commitment to supporting sustainability issues, the Egyptian company Valley Water uses PET bottles as eco-compatible and recyclable packaging of Elano water, produced in factories equipped with the latest generation green technologies that allow reduced environmental impact and significant energy savings.



The complete line of 36,000 bottles/hour supplied by SMI to Valley Water for the bottling of Elano water, allows the customer to optimise the space within the production plant to have an efficient and performing line able to meet the growing demands of the Egyptian market for a high quality product.



The new turnkey system consists of an EBS 16 E ERGON ECOBLOC® stretch-blow moulder with a HEVF filling and capping system; a WP 600 ERGON case packer; an APS 3070 L ERGON palletiser; conveyor belts, labeling machine, encoder and control systems.



➤ ECOBLOC® 16-78-18 AND HEVF SYSTEM FOR BLOWING-FILLING-CAPPING

Bottles worked: 0.6 and 1.5L bottles in PET for natural water Elano

Speed: production up to 36,000 bottles/hour (0.6 L format).

Main advantages:

- Compact and flexible solution
- Reduced energy consumption
- High-efficiency rotary stretch-blow moulding system equipped with motorised stretch rods, whose electronically controlled operation, does not require pneumatic cams; precise management of the stretch rod stroke and accurate control of its position, as well as significant energy savings
- Preform heating module with energy-efficient IR lamps
- Stretch-blow moulding module equipped with a two-stage air recovery system, which reduces energy costs related to the production of compressed air at high pressure
- Fully motorised stretch rod, which allows you to easily manage the format change
- The machine groups the operations of stretch-blow moulding, filling and capping of PET bottles in a single block and therefore does not require the rinsing machine and the airveyors between the blower and the filler
- Filling system with high precision flow meters installed near each tap
- Compact frame, taking up less space in the filling line and reduced transport costs
- Filling chamber completely isolated from transmissions that do not come into contact with any type of liquid
- The machine frame is inclined towards the drainage points resulting in a higher level of hygiene
- The operator can access the various higher parts of the machine in extreme safety, with consequent reduction of maintenance times and costs
- Quick format change of bottle guiding equipment.



➤ **WRAP-AROUND CASE PACKER WP 600 ERGON**

Packs created: boxes of 4x5 for 0.6 L bottles and boxes of 3x4 for the 1.5 L bottles

Main advantages:

- Continuous packaging through a wrap-around system, which guarantees a smooth production process, without jerky movements
- Ideal solution to obtain impact-resistant packaging, able to protect the product during transport
- Better pack quality and reduced mechanical wear
- Possibility to graphically customise the cardboard box to capture the consumer's attention, offering the producer more opportunities for marketing and product promotion
- Extremely ergonomic machine structure
- Easier and safe maintenance operations
- POSYC® control panel, which slides along the entire length of the packaging machine, allowing the operator to have easy and efficient use of the system
- Highly intuitive, graphical interface, touch-sensitive screen and advanced real-time diagnostics and technical support.

➤ **AUTOMATIC PALLETISING SYSTEM APS 3070 L ERGON**

Product worked: cardboard boxes arriving from the WP 600 ERGON

Pallets created: 1000x1200 mm.

Main advantages:

- Single-column system with two Cartesian axes for palletising boxes, bundles, trays and packs in general
- Extremely flexible modular structure and easily adaptable to the logistical conditions of the line
- Ergonomic palletising system that allows the operator to easily and safely carry out all activities related to the use, cleaning and maintenance of the system
- High operational flexibility that allows the creation of multiple palletising patterns according to the specific needs of the customer
- Possibility to customise and adapt to the needs of format changeover, product change and / or layout of the system
- Eco-sustainable solution, thanks to the use of ICOS motors equipped with integrated digital servo-drive (driver), able to simplify the wiring of the machine and ensure greater energy efficiency, lower noise and reduced wear of the components
- TCO (Total Cost of Ownership) is optimised thanks to low management and maintenance costs.



WADI EL-NATRUN

Wadi El-Natron is a small town, located on the edge of the Western Desert, located about 90 kilometers northwest of the city of Cairo, halfway between the capital and Alexandria in Egypt. It is a low lying area about 23 meters below sea level and 48 meters below that of the Nile, it was important for the ancient Egyptians who extracted salt, present in large quantities thanks to the presence of many lakes that periodically dried up. Wadi El Natrun in Arabic means “valley of natron” (sodium carbonate decahydrate). This semi-desert low lying area, in addition to being venerated by the ancient Egyptians because of the salt used in the mummification process, was and remains one of the most sacred regions for Christianity, whose first settlements date back to the third century AD. C.; Over the centuries, in fact, the area had hundreds of monasteries, the inhabitants of which, were mostly monks and hermits. It is said that in the fifth century this area hosted up to 60 religious settlements, which in the following centuries were plundered by the nomadic populations and then by the Arabs. Today, unfortunately, only four remain (UNESCO World Heritage Sites): the monasteries of Saint Macarius, the Syrians, Saint Pschoi and the Romans.







HUIHUANG

UNITED (TIANJIN) FOOD CO. LTD.

THE CONSUMPTION OF BOTTLED WATER IS CONSTANTLY GROWING IN EVERY PART OF THE WORLD AND THE FORECASTS OF THE MAJOR RESEARCH INSTITUTES INDICATED THAT THE TREND WILL CONTINUE IN THE FUTURE. CHINA IS NO EXCEPTION, WHERE, IN THE FIRST QUARTER OF 2023 ALONE, THERE WAS AN INCREASE IN SALES OF BOTTLED WATER OF 10.9% (SOURCE GLOBALDATA). FACED WITH A SCENARIO OF STRONG EXPANSION, THE MAIN CHINESE BRANDS IN THE BEVERAGE SECTOR HAVE LAUNCHED A PROGRAM OF INVESTMENTS IN MORE MODERN AND EFFICIENT PRODUCTION LINES, AN EXAMPLE IS WHAT HAPPENED IN THE CITY OF TIANJING, WHERE THE COMPANY HUIHUANG UNITED FOOD, AN IMPORTANT BOTTLER OF LEADING BRANDS SUCH AS COCA-COLA AND C'ESTBON, TURNED TO SMI, WITH WHICH IT HAS BEEN COLLABORATING FOR YEARS, FOR THE SUPPLY OF AN INTEGRATED BLOWING-FILLING-CAPPING SYSTEM ECOBLOC® ERGON, THE FIRST INSTALLED BY SMI IN CHINA, INTENDED FOR BOTTLING C'ESTBON BRAND PRODUCTS IN 4.5 L PET CONTAINERS.



➤ **SECTOR: WATER**

HUIHUANG UNITED (TIANJIN) FOOD CO. LTD.
Tianjin, People's Republic of China

- Integrated stretch-blow moulding, filling and capping system ECOBLOC® ERGON 6-16-4 HC HEVF



VIDEO



HUIHUANG UNITED (TIANJIN) FOOD CO. LTD.

Huihuang United (Tianjin) Food Company was founded in 2011 as a subsidiary of Macau Huiyang International Investment Co. Ltd., a company belonging to the industrial giant Zhuhai Zhongfu Enterprises Co.

The Tianjin-based company, which currently employs about 300 people, has distinguished itself since the beginning of its activity for the ability to manage large productions for third parties; since 2011 it collaborates, for example, with the US

multinational Coca-Cola.

The first supply of SMI to Huihuang United (Tianjin) Food Company dates back to the same year, with the installation of an SK 802 F shrink wrapper for packing 0.55 L PET bottles in 6x4, 5x3 and 4x3: this machine is currently installed in one of the two 48,000 bottles/hour



production lines of the Tianjin plant.

The Chinese company extends over an area of about 100,000 square meters, of which 68,000 square meters occupied by bottling plants.

The warehouse area alone occupies an area of 36,000 square meters and allows Huihuang United (Tianjin) Food Co. to store more than 1.5 million packs of C'estbon-branded water, while ensuring its customers a daily delivery of 250,000 packs.

Within the production area, 6 complete lines are currently installed for bottling and packaging various products in various pack formats.

The new ECOBLOC® ERGON integrated system recently supplied by SMI, is part of a 6,000 bottles/hour production line for 4.5 and 6 L PET containers branded C'estbon; the new plant is therefore added to the first stretch-blow moulder supplied by SMI in 2015 (in partnership with Sacmi), intended for the production of the same bottle; while the SK 600 F shrink wrapper supplied in 2013, dedicated to the packaging of 0.35 and 0.55 L PET bottles in film-only, is installed inside the 36,000 bph line.



➤ THE BOTTLED WATER MARKET IN CHINA

Among the most important factors in the development of the bottled water sector, it is certainly worth mentioning the constant growth in the size of the Chinese market, both in terms of litres produced annually and in terms of the number of consumers.



Bottled water volumes grew yearly with a 10.9% increase in the first quarter of 2023, driven by the boom in retail sales.

The increase in household consumption has fuelled demand for water in general and in particular in large packaging.

In addition, the recovery of tourism, following the lifting of post-pandemic travel restrictions, represented another strong boost to the recovery and expansion of the sector.

It is estimated that during 2023 the sales volumes of bottled water will grow annually by 8.7%, a trend that should also be confirmed for the following years due to the increasing propensity of the Chinese population for healthier and more responsible lifestyles for the well-being of society and the environment.

(Source Globaldata 2023)



credits®: Shwangtianyuan, CC BY-SA 4.0 via Wikimedia Commons

FOCUS ON ZHUHAI ZHONGFU ENTERPRISES CO.

Founded in 1985 in Zhuhai City, Guangdong Province, Zhuhai Zhongfu Enterprises Co. is a private group active in a wide range of industrial sectors, with particular presence in the production and supply of PET bottles and in the bottling of beverages for third parties with plants among the most modern and extensive in China.

It currently has more than ten plants for the large-scale production of bottled water, soft drinks, tea and other liquids, all equipped with state-of-the-art automated production lines.

Among these, the plant installed at Huihuang United (Tianjin) Food Company stands out, which, thanks to its long experience in bottling in containers with standard and large capacity formats, has been producing beverages for years, on behalf of important brands such as Coca-Cola and C'estbon.

The company is also the market leader in the production of packaging materials such as PET preforms, polyvinyl chloride (PVC) labels, oriented polypropylene (OPP) film labels, shrink film, caps and cartons, which are mainly used in the food and beverage industry (soft drinks, bottled water, beer, juices, tea, isotonic drinks, milk, sauces, etc.).



Zhuai Zhongfu Enterprises is one of the top 100 light industry enterprises in Guangdong Province and one of the top 500 in China, as demonstrated by the “Best of China” award given by the National Development Commission for primacy in the production of PET bottles.

➤ **SMI MACHINERY BEIJING CO. LTD.**

SMI is constantly committed to providing its Chinese customers with fast and efficient local support to meet the needs of a rapidly evolving market.

SMI has been present in China for years with SMI Machinery Beijing Co. Ltd. subsidiary, in order to provide several local customers with appropriate technical and sales support.

The current staff, consisting of 12 people, offers competence and professionalism in the management of numerous customer requests for technical assistance, spare parts, maintenance, new applications, and has represented a strong point for the project carried out at Huihuang United (Tianjin) Food Co.



A CHAT WITH THE CUSTOMER

- **Interview with Huang Gang**
Plant Manager of Huihuang United (Tianjin) Food Co. Ltd.



Q: When and how did Huihuang United (Tianjin) Food Co. start production?

A: Our company started the beverage bottling business in 2011 and immediately distinguished itself thanks to the production of Coca-Cola and C'estbon drinks.

Q: What were the main stages of the company's growth?

A: The first investment dates back to 2011, the year Huihuang United Food was established, as part of the collaboration with Coca-Cola for the bottling and packaging process of their

beverages. Another step forward was made in 2013, when the production capacity of our plants was enhanced to cope with the new collaboration with the C'estbon brand. Today, after 10 years, continuous innovation has led us to create a new project to further increase our production thanks to the new integrated system ECOBLOC® ERGON supplied by SMI.

Q: What are the main factors that convinced you to invest in a new bottling line supplied by SMI?

A: In 2015 we purchased an SMI rotary stretch-blow moulder and filler for the production of 4.5 L PET containers, which satisfied us and has guaranteed stable and successful production over the years. For this reason, also due to the recent investment that was necessary to increase production in response to a strong market demand, we had no doubts when choosing SMI for a new ECOBLOC® ERGON integrated system for the production of large capacity PET containers of 4.5 and 6 L for bottling still water.

AT THE SIDE: HUANG GANG, PLANT MANAGER OF HUIHUANG UNITED (TIANJIN) FOOD CO. LTD. WITH LEO FENG, SALES AREA MANAGER OF SMI MACHINERY BEIJING CO. LTD →

Q: How do you see the food & beverages market in the future?

A: I believe that in this sector there is a lot of room for development and innovation in China, given the constant growth of social well-being of increasingly large sections of the population and the improvement to people's lifestyle.

Companies operating in the food and beverage sector must pay more and more attention to the new needs of consumers, creating a wide and diversified offer of products made with advanced and sustainable processes for the well-being of the planet.

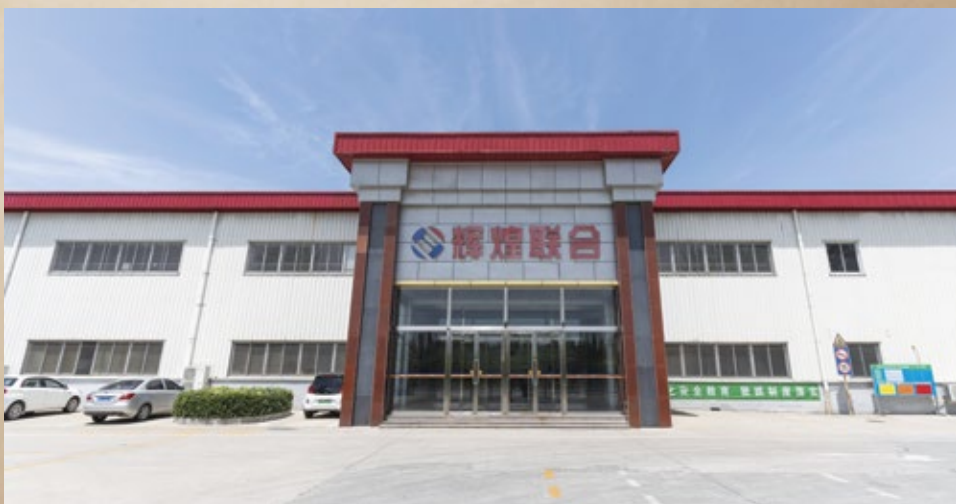
Q: How do Huihuang United (Tianjin) Food Co. products differ from others available on the market?

A: Quality and safety are the fundamental principles underlying our business activity. From my point of view, these are the elements that differentiate us the most and allow us to succeed within the market.

Q: When is it important for Huihuang United (Tianjin) Food Co. to have SMI's direct presence in China through its subsidiary SMI Machinery Beijing?

A: It is essential to guarantee a fast, efficient and convenient technical and after-sales support.

The presence of a local branch has represented and will increasingly represent in the future, an essential element for our collaboration with SMI, because a large company like ours, must be able to count on qualified and high-level support from its trusted suppliers at all times.



SMI SOLUTIONS

FOR HUIHUANG UNITED FOOD



The collaboration between Huihuang United (Tianjin) Food Co and SMI began 12 years ago with the purchase of an SK 802 F shrink wrapper, installed within the production line dedicated to the packing of 0.5 L Coca-Cola bottles in 6x4, 5x3 and 4x3 in film only and with the subsequent supply of an SK 600 F shrink wrapper installed on the 36,000 bottles/hour line, necessary to increase the production of 0.35 and 0.55 L bottles.

In the field of primary packaging, the collaboration between the Chinese company and SMI began in 2015, with the installation of a 6-cavity stretch-blow moulder for the production of 4.5 and 6 L PET containers for the C'estbon brand.

The recent investment in SMI's first ECOBLOC® ERGON plant in China, has allowed the customer to increase the production of 4.5 and 6 L formats, which are in high demand by the market, and to further increase the quality and technological profile of the solutions adopted.

Huihuang United (Tianjin) Food and Zhuai Zhongfu are two industrial companies particularly attentive to the environment.

Consequently, energy saving and the reduction of carbon dioxide emissions have become one of the pillars of corporate social responsibility, which requires the increasingly massive use of new equipment and technologies designed to combine business efficiency and ecosystem protection.





➤ ECOBLOC® ERGON 6-16-4 HC HEVF STRETCH-BLOWING/FILLING/CAPPING SYSTEM

Containers worked: 4.5 and 6L PET containers of C'estbon natural water.

Main advantages:

- Compact solution for stretch-blow moulding, filling and capping large capacity PET bottles
- Does not require a rinsing machine and air belts between blower and filler
- Precise and fast filling and capping process, thanks to the electronic control system of operations, motorised stretch rods and the use of high-efficiency valves controlled by flow meters
- Reduced energy consumption
- Energy-efficient IR preform heating lamps
- Two-stage air recovery system, which reduces energy costs for high-pressure compressed air production
- Filling valves that manage two speeds in order to fill homogeneously, efficiently and without product spilling from the container. The duration of the filling cycles (slow or fast) can be managed in a simple and intuitive way through the recipes in the human-machine interface (HMI Posyc®)
- Reduced maintenance and management costs of the plant

➤ EASY-CAP CAP ELEVATOR /SORTER

Function: gravitational cap sorter, which takes the caps from a hopper and turns them correctly until they reach the bottling line.

Main advantages:

- Very compact structure, made of AISI 304 steel, suitable for any layout solution
- Smooth and linear operation, that will only carry the caps that are in the correct position
- System suitable for different types of plastic caps
- User-friendly operator interface, which allows easy and efficient use of the machine by the operator.



THE CITY OF TIANJIN: "HEAVENLY RIVER FORD"



TIANJIN: MOSAIC OF DIFFERENT STYLES



Tianjin (literally “celestial river ford”) is the fourth largest municipality in the People’s Republic of China, after Chongqing, Shanghai and Beijing, administered directly by the central government. The city, which lies in northeastern China along the banks of the Hai River, is largely flat (with the exception of the northern part where the Yanshan Mountains are located) and is known for the

exceptional beauty of the Italian, French and Austro-Hungarian districts. Established in the past as trading outposts of their respective countries, they make this metropolis of 14 million inhabitants a mosaic of architectural styles that cannot be seen in other Chinese cities. Here, in fact, you can go from the typical golden empire-style bridge of the French district to the Tyrolean bell tower of the Austrian quarter and the Versailles-inspired buildings of the Italian quarter, all

in full Chinese atmosphere. Tianjin is one of the major production and commercial centers of the People’s Republic of China, where thousands of companies operating in high-tech sectors as well as prestigious universities and renowned research and innovation centers are based. Since 2007, the city, which, in recent years, has recorded one of the largest year-on-year GDP growth, has also hosted the summer session of the World Economic Forum in Davos.



IT'S NOT A DREAM, IT'S THE MALDIVES

IMAGINE SAILING AT SEA, A COOL BREEZE BLOWING THROUGH YOUR HAIR AND THE SUN'S RAYS CARESSING YOUR SKIN. THEN ARRIVING ON AN ISLAND AND WALKING BAREFOOT ON THE FINE WHITE SAND, BREATHING DEEPLY AND LISTENING TO THE GENTLE SOUNDS OF NATURE, THE MELODIOUS SONGS OF BIRDS AND WAVES CRASHING ON THE MAGNIFICENT COASTS. THE PALM TREES SWAYING TO THE RHYTHM OF THE RELAXING BREEZE, IMMERSING OURSELVES IN THE TURQUOISE WATER, SO CLEAR AND CRYSTALLINE THAT IT SEEMS LIKE A DREAM. IT'S A DREAM COME TRUE, IT'S THE BEAUTIFUL MALDIVES, AN ARCHIPELAGO OF 1,200 CORAL ISLANDS IN THE INDIAN OCEAN. HERE EVERYTHING IS MAGICAL AND SURREAL. IT IS HEAVEN ON EARTH, PARADISE OF PARADISES.

➤ **SECTOR: WATER**

MALÉ WATER & SEWERAGE COMPANY PVT. LTD. (MWSC)
Malé, Maldives

COMPLETE FULL LINE COMPRISING:

- ENOBERG monoblock ELC for rinsing, filling and capping
- ACP 20 S ERGON case packer with PID for disposable glass bottles
- ACP 20 G ERGON case packer and DV for returnable glass bottles
- Conveyor belts and subsupplies: bottle washer, water carbonation system, CIP, self-adhesive labeler, roll-fed labeller for plastic paper labels, drying system.



An aerial photograph of a tropical beach with clear turquoise water, a small boat, and a coral reef. The sky is blue with scattered white clouds.

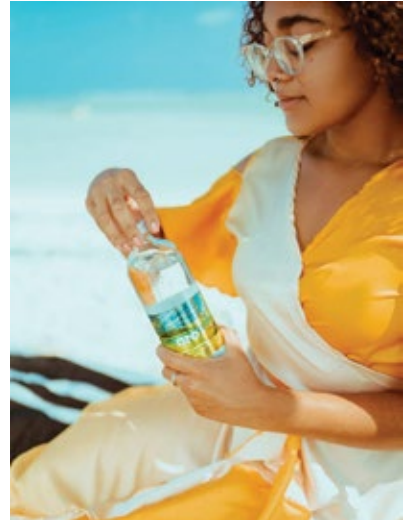
MALÉ WATER

& SEWERAGE COMPANY PVT. LTD.

“BOTTLING IN PARADISE”: SECOND EPISODE

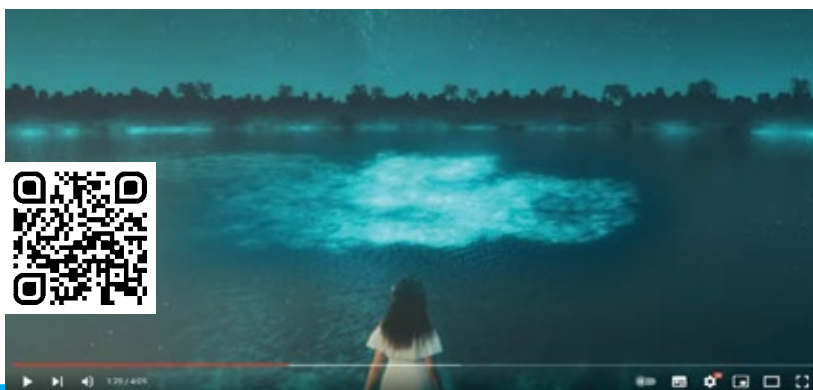
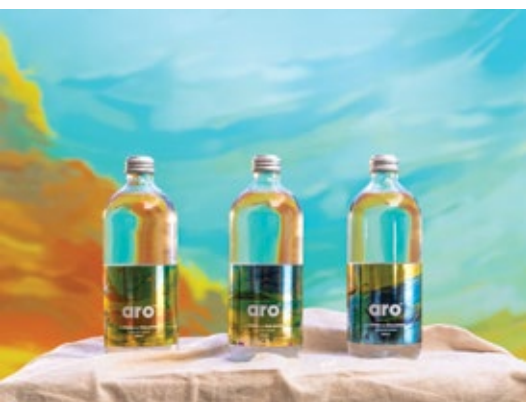
Behind the postcard image of heaven on earth, are companies such as Malé Water & Sewerage Company Pvt. Ltd. (MWSC), which, thanks to the growing commitment to sustainable development and the use of cutting-edge technologies, contribute to the economic progress and environmental protection of one of the most exclusive places in the world. Maldivian life revolves around the protection of its beautiful landscapes; therefore, industrial realities such as MWSC, leader in the production and bottling of natural water, pay the utmost attention in adopting the latest generation production systems capable of drastically reducing, if not completely zeroing, the impact on the ecosystem in which they operate. After the first collaboration in 2012 between SMI and Malé Water for the design, production and installation of a complete PET line of 14,000 bottles/hours, recently the

Maldivian company has again turned to SMI for the supply of a glass line, both for returnable and disposable containers, which was necessary for the launch of the new ARO branded bottle, this brand represents “the Maldives in a bottle”. For this second “Bottling in Paradise” project, intended for the production of still and sparkling water, the MWSC company chose a filling and capping monoblock of the ENOBERG ELC range (a company within the SMI Group) and two SMI packaging machines with the pick & place system of the ACP ERGON range; the first is intended for the packing of disposable glass bottles in RSC boxes, while the second for the packing of returnable bottles in plastic crates. The packaging machine that manages the plastic crates has been integrated into the pre-existing PET line to allow the customer to pack, in addition to the glass containers, also the TaZa PET bottles in RSC cardboard boxes.



➤ **FOCUS ON MALÉ WATER**

With the launch of the new ARO glass bottle, Malé Water & Sewerage Company Pvt. Ltd. (MWSC), established in 1995 with the main objective of meeting the growing water needs of the capital Malé, confirmed itself as an important player for the local economic system. The substantial and continuous investments in advanced technologies, the plans for implementation of scheduled plant maintenance and the professional growth of the company staff are the key factors that have allowed Malé Water to respond effectively and quickly to market demands in terms of quantity and quality of the product offered.



AT THE SIDE: THE VIDEO ENTITLED "NALA NALA RAAJJE" - WHICH MEANS "KEEPING THE MALDIVES BEAUTIFUL" - LAUNCHED BY THE MALDIVIAN MINISTRY OF TOURISM TO CELEBRATE THE GOLDEN JUBILEE OF TOURISM IN THE ARCHIPELAGO.





THE MALDIVES IN A BOTTLE

Inspired by the extraordinary natural beauty of the Maldives archipelago, Malé Water & Sewerage Company (MWSC) recently introduced the new glass bottles of “ARO”, the first premium water brand of these islands, specifically aimed at the tourism sector. The ARO, brand, which in Dhiverhi (the local language) means “fresh”, began as a philosophy of life to keep the Maldives in an “aro” state, that is fresh, pure, uncontaminated. ARO is the company’s eco-conscious commitment to reduce the use of single-

use plastic across the nation and to enclose all the magic of the earthly paradise of the archipelago in a bottle: “the Maldives in a bottle”! Through the new glass bottles, the MWSC company captures the essence of the pristine purity of the Maldives and spreads the culture of its ecosystem. ARO water therefore, has become an engaging experience for consumers, at regular intervals the labels on the 0.5 and 1 L bottles, tell particular stories of the Maldives, inviting consumers to learn more about these numerous and beautiful islands of the Indian Ocean.



➔ **“ARO” (AH-ROH): FRESH, FULL OF LIFE**

ARO Life is a philosophy that strives to keep the Maldives in an “aro” and “fresh” state.

It is a holistic approach, aimed at enriching life and finding the formula for sustainable growth. ARO Life is a platform for local brands and artists, thanks to which this philosophy has become a project that involves local communities. The labels of the bottles are a work of art by Maldivian artists through which they express their creative flair; each label recalls the paradise of paradises, the Maldives, and responds to the slogan “Nala Nala Raajje” launched by the Ministry of Tourism, to celebrate the Golden Jubilee of tourism in the archipelago.

Moodhu: the label of the sea and the ocean

Moodhu’s design, is inspired by azure waters and the underwater world. The label represents a breathtaking spectacle of graceful beauty, with the presence of species of unique fish, all surrounded by a Maldivian boat, an example of the unique craftsmanship that has been handed down for generations.

Dhonveli: the label of the white sand

Dhonveli’s design depicts the beautiful, white, sandy beaches and elements of the exotic landscape of the islands, with its palm trees, heron and rare shells.

Iruvai: the label of the hot monsoon

The label “Iruvai” is inspired by the sunny tropical life of the Maldives and features the typical elements of the hot and dry monsoon of these islands, such as the dragon fly, the beautiful tropical flowers and the surf that is practiced mainly during this period.

“Nala Nala Raajje”

Nala Nala Raajje is the slogan launched by the Ministry of Tourism to celebrate the Golden Jubilee of the tourist influx in this remote corner of the world. On that occasion, the Maldivian authorities also launched a multimedia challenge that took place on various social platforms, with fantastic cash prizes and holiday packages for the winners. Participants had to upload short video clips to show the beauty of the Maldives and raise awareness of the issue of waste management.





aminow



THE SUNNY SIDE OF LIFE:
SUN, SAND AND SEA



Marked as “Maldives in a bottle”, the three sets of ARO bottle labels represent a particular aspect of the Maldives and symbolise the natural beauty of this earthly paradise.

Glass bottles, available in 0.5 and 1 L, are helping these islands to gradually abandon single-use plastics.

The new ARO brand was presented to the market in November 2022 during a special ceremony, held in the magnificent marina of The Marina at Crossroads, an extraordinary leisure destination fully integrated on multiple islands, in the presence of the Minister of Transport and Civil Aviation Aistha Nahula.

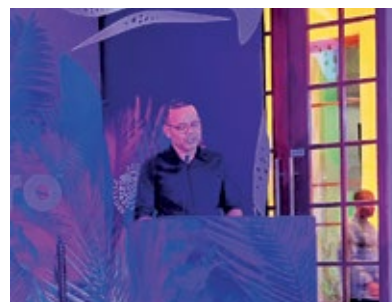
SMI ASIA Services Sdn Bhd, represented by Managing Director Davide Danna, had the honor of participating in the important event as a partner of MWSC for the packaging process of the new bottles.

On that occasion, the company said that the ARO water bottles are in line with the government’s policy for reducing the use of disposable plastic, introduced with the aim of promoting the Maldivian slogan “Nala Nala Raajje”, which means “keep the Maldives beautiful”.

In a speech during the ceremony, MWSC CEO Hassan Shah said that “the ARO water bottle represents the Maldives in a bottle, because it encompasses all aspects of these extraordinary islands.”

This is a very important step forward to promote the beauty of the Maldives among tourists from all over the world, and to highlight the importance of operating sustainably to protect and preserve the natural environment,” Shah noted.

The CEO of MWSC also said that “MWSC will launch other products under this brand that can compete with products from foreign markets”.



↑ ABOVE: HASSAN SHAH, CEO OF MWSC.

ARO water undergoes a meticulous treatment and mineralisation process, which results in high-quality enhanced and balanced water. It is the premium water of the Maldives.

During the ceremony, MWSC CEO Hassan Shah also said that “Maldivian tourism is advancing at a high speed and the water bottling industry can only be supported by introducing and promoting local products.”



➔ **SMI ASIA SERVICES SDN BHD**

Since 2012, the SMI Group has been present in Southeast Asia with the subsidiary SMI ASIA SERVICES SDN BHD, which provides fast and efficient local support to numerous customers in the area. Competence, professionalism and availability of the 21 members of the commercial and technical staff, are the key factors behind the activity of the branch, which is based in the city of Shah Alam, a few kilometers from Kuala Lumpur (Malaysia), in a structure of 1,500 m² used as commercial and technical offices and a spare parts warehouse. The presence of a local structure represented a strong point for SMI in 2012, for the first line project installed in Malé Water, and in 2022 for the new project dedicated to the packaging of ARO bottles. The direct presence on the territory allows SMI to respond promptly and effectively to the requests for competitive bottling and packaging plants and offer an excellent and fast service, operational even when the offices of the SMI headquarters in Italy are closed. SMI ASIA provides a complete service, from the design of filling and packaging plants to the commercial management of orders, up to monitoring and maintenance of the same. To date, the SMI ASIA branch supports almost all of Southeast Asia, covering an area that includes the presence of over 1,000 SMI machines in operation. The continuous investments have also allowed the Malaysian branch to have a large spare parts warehouse, with about 3,200 codes of different parts, for a total value of about 600,000 euros.



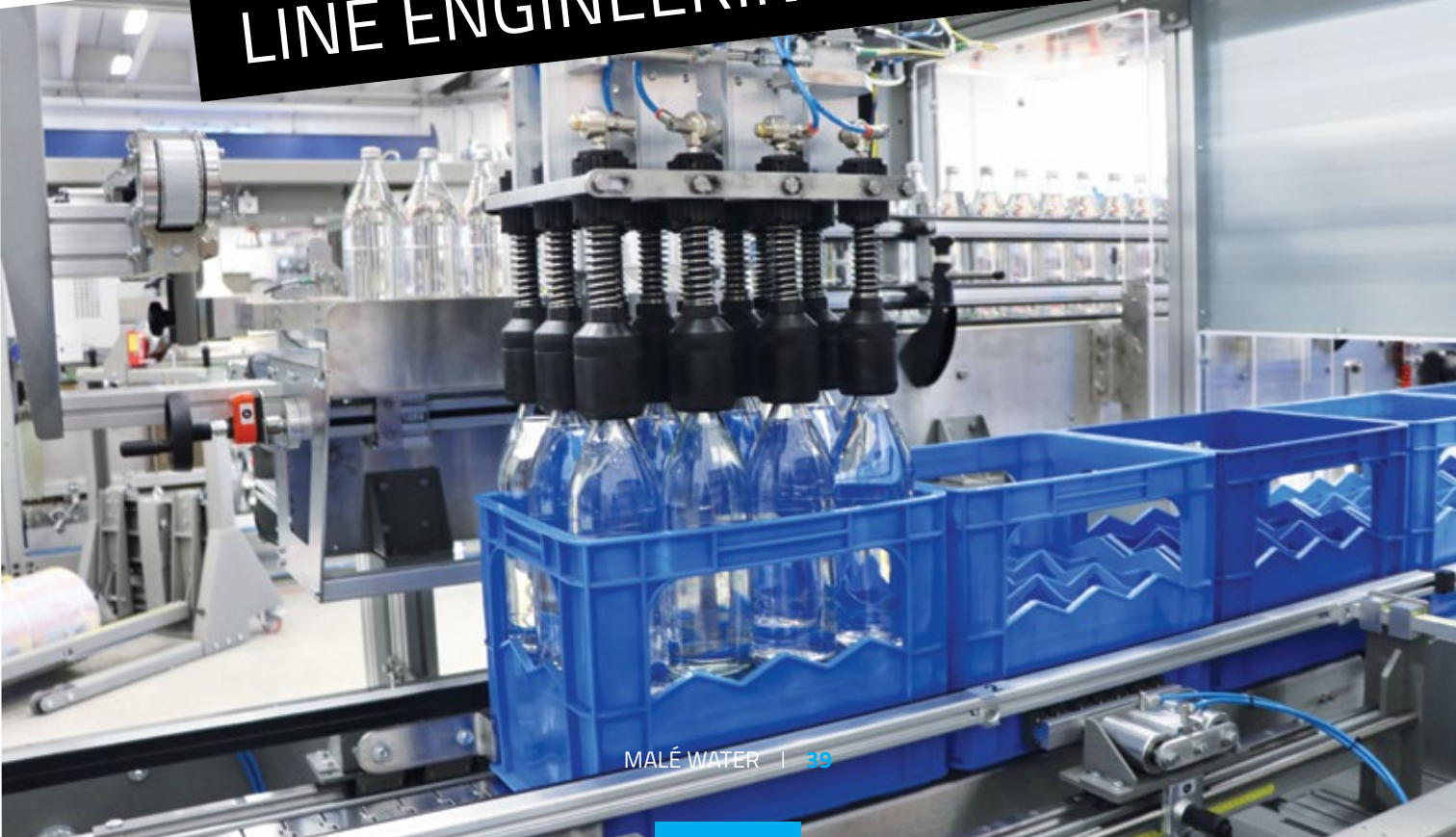
AT THE SIDE: SOME MOMENTS OF THE PRESENTATION CEREMONY OF THE NEW ARO BRAND - FROM LEFT: DAVIDE DANNA, DIRECTOR OF SMI ASIA SERVICES AND ALI SHAHEEM, GENERAL MANAGER MANUFACTURING OF MWSC.





VERSATILE AND COMPACT

LINE ENGINEERING SOLUTION



SMI SOLUTIONS FOR MALÉ WATER



The line solution recently installed by SMI at the Malé Water production plant is a bespoke line created to fully meet the technical and economic expectations of the customer, who, since the preliminary stages of the study of the new project dedicated to the packaging of ARO and TaZa glass bottles, has emphasised the sustainability of the proposed solutions.



Malé Water's goal was to implement innovative solutions, based on latest-generation machines, characterised by cutting-edge solutions in terms of reduction of production costs, electricity consumption, maintenance costs and environmental protection.

The new supply is integrated with the first 14,000 bottles/hour PET line installed by SMI in 2012 for the bottling and packaging of TaZa bottles in PET, and ensures the customer the simultaneous



operation of the two production lines when the packing of PET bottles is carried out in shrink film bundles.

For Malé Water & Sewerage Company, it is essential to have reliable and flexible production facilities that can easily adapt to changing market needs.

After a careful analysis of the Maldivian company's needs for the production of still and sparkling water in disposable and returnable bottles, the experts of SMI's System Engineering Department have developed a line solution able to meet the needs of simplicity, cost-effectiveness of management, compactness of the systems and reduced maintenance.

The complete line solution for TaZa PET and glass bottles and for the new ARO glass bottles proposed by SMI, provides the integration of the plant's management and control systems into a few "touch-screen" logical units, so as to allow the entire bottling line to be managed by a small number of operators.

The storage of raw materials is centralised in a single area, facilitating the handling of pallets and raw materials, while the unloading area of finished products, is located on the same side of the line making the production process more fluid and efficient.



➤ ELC RINSING, FILLING, AND CAPPING MONOBLOCK

The line solution supplied to Malé Water for the "Bottling in Paradise" project of the new ARO bottle includes a rinsing, filling and capping monoblock from ENOBERG's ELC range for level gravity filling.

Products worked: 0.5 and 1 L ARO and TaZa glass bottles filled with both still and sparkling water. Closure with ROPP aluminum screw cap.

Main advantages:

- Compact monobloc design
- Reduced overall dimensions within the production line
- Low transport and maintenance costs
- Excellent value for money
- Quick format changeover to quickly switch from one bottle to another
- Versatile machine suitable for different products
- Format parameters can be managed directly through touch-screen HMIs
- High level of reliability
- Independent movement of the machine axes by means of brushless motors with integrated drive (ICOS series), to ensure perfect synchronism between the machine starwheels and low noise during operation.

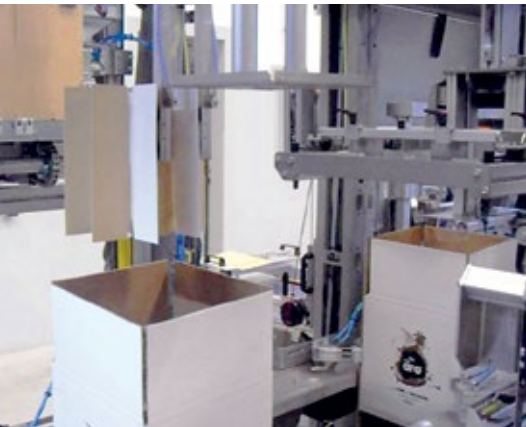
➤ ACP 20 G ERGON CASE PACKER

Products worked: TaZa 0.5 L and 1 L disposable glass bottles

Packs created: the bottles are placed in plastic crates in 3x4 format

Main advantages:

- Pick & place solution for bulk product insertion from above
- Flexible solution with the possibility of placing the bulk product in cardboard boxes or plastic crates
- Solid monobloc structure
- High flexibility to pack a wide range of products
- Grouping of alternating cycle products, through a pneumatic separation system
- Cardboard magazine located next to the machine, with easy and ergonomic loading of pre-folded blanks (for packing in cardboard boxes)
- Possibility to overlap the product in the box during the insertion of the same
- Possibility to process delicate products, such as wines, sparkling wines and liqueurs, without damaging the labels during processing in the machine
- Easy machine access
- Mechanical wear and maintenance reduced to a minimum
- MotorNet System® automation and control technology based on Sercos fieldbus



➤ **ACP 20 S ERGON CASE PACKER with separator insertion device**

Products worked: ARO glass bottles in 0.5 and 1 L. TaZa PET bottles in 0.33 / 0.5 / 1.5 L.

Packs formed: 0.5 L ARO bottles are packed in cardboard boxes equipped with separators in 4x4, and the 1L bottles in 3x3. TaZa PET bottles in 0.33 and 0.5 L are packed in boxes in 4x6 and the 1.5 L PET bottles in boxes of 3x4.

The ACP 20 S ERGON case packer supplied by SMI carries out the secondary packaging of the new ARO glass bottles and the TaZa PET bottles of 0.33 L, 0.5 L and 1.5 L that were previously packed by a wrap-around case packer of the LWP 30 ERGON range.

In the area of the machine infeed, a belt equipped with low friction coefficient, thermoplastic chains transports the product to be packed.

In the former area, the products are grouped in the desired format alternately, by means of a mechanical product separation system, consisting of a pneumatic device for the upper and lower blocking / release of the bulk product, adjustable in height and width on the leading side of the product.

The model supplied to the Maldivian customer is equipped with the optional PID (Partitions Inserting Device) to insert pre-mounted separators of stretched cardboard inside the cardboard boxes, in order to protect the glass bottles from damage or breakage and preserve the labels from possible abrasion.

The cardboard boxes made by the new ACP 20 S ERGON are transported by Smiline conveyor belts to the infeed of the APS 1035 P automatic palletising system, which has been in operation since 2012; It is a mono-column system with two Cartesian axes, where the vertical axis consists of a fixed column along which the horizontal transverse runs, while the horizontal working axis is formed by the tansom, along which the gripper runs.

The packs arriving on the single-lane infeed belt are grouped in the row pre-former area. The row is then lifted by the gripper, which, with rapid and precise movements, places it in the correct place on the pallet, contributing to the formation of a complete layer in a very simple way.





➤ CONVEYOR BELTS

Function: transport of glass bottles from the rinsing, filling and capping monobloc; infeed and outfeed handling to/from ACP ERGON case packers; integration into the PET conveyor line supplied in 2012.

Main advantages:

- Loose product conveyor belts ensure smooth handling of containers entering the ACP case packer
- Compact and uniform movement of cardboard boxes and plastic crates
- The modular structure and the high compatibility with other systems allow installation, start-up and testing operations to be carried out in an extremely simple way
- Synchronisation with the conveyor belts of the PET line for the passage of PET bottles on the line of glass bottle belts for packing in RSC boxes
- Simplified maintenance operations
- Highly reliable system, thanks to the structure and components in AISI 304 stainless steel.
- Format changeover times reduced to a minimum.

THE ADVANTAGES OF A SMART END OF LINE

End-of-line packaging plays a fundamental role in ensuring companies in the food, detergents, chemical and pharmaceutical sectors

efficient production, able to adapt quickly to market developments and able to improve the quality and sustainability of the final packaging.

The evolution of the latter is also greatly influenced by the dynamics of growth in retail sales, which in many cases determine the progressive abandonment of manual activities to switch to automatic palletising systems.

These systems are in fact more flexible and competitive and allow you to quickly adapt the production line to the new purchasing habits of consumers, a goal that can be achieved more easily if, within your organisation, companies introduce the

innovative and intelligent solutions typical of modern smart factories.

An example of such solutions, is represented by the SMI automatic palletising systems of the APS ERGON series, which allow you to manage an uninterrupted, efficient and flexible production flow thanks to the latest generation technologies.

The perfect synchronisation between bottling, packaging, pallet loading, palletising layer formation and interlayer insertion translates into a great competitive advantage for the end user of these automated systems, among which the new SMI APS 4140 L ERGON palletiser stands out.



APS 4140 L

MORE EFFICIENT END OF LINE WITH DOUBLE COLUMN PALLETISER

The APS 4140 L ERGON system is an advanced system equipped with two independent columns for palletising cartons, bundles, trays and packs in general up to 140 packs per minute/400 layers per hour (variable values depending on the product) It consists of several modules that can be configured individually according to the logistical conditions of the end-of-line area and palletising needs.

The heart of the APS ERGON system consists of the two vertical columns: the first equipped with a motorised belt, while the second with a basket.

Through an innovative system of rotation and/or continuous pack handling on three Cartesian axes (x, y, z), the bundles arriving on the single-row belt are turned, translated and arranged in several rows in the position provided by the palletising pattern, thus performing the layer.

The first column receives the complete layer from the input module and, moving on the vertical axis, brings the product to the height of the basket of the second column; From here, through the motorised belt, the layer is inserted into the basket that deposits it on the pallet. At the end of this operation, the basket, moving on the vertical axis, moves to the waiting position of the next layer.



APS 4140 L
VIDEO

scan this QR code



➤ ADVANTAGES

- The inlet with continuous preformation is very compact and allows the end of line spaces to be optimised.
- The layer formation system is equipped with rounded, sliding protection doors in anodised aluminum, which allow all the motors (low energy consumption) to be on the outside of the mechanical groups they operate.
- The door closure system is equipped with a deceleration device, which slows down the final phase of the cycle by accompanying the door harmoniously.
- The ergonomic and functional structure of the frame allows the operator to easily carry out all the activities related to the use and maintenance of the system.

➤ PALLET FEEDING SYSTEM

Magazine module with a maximum storage capacity of 300 kg (pallet modules with higher capacity are available as optional accessories) and/or a maximum total height of 1800 mm.

The system is designed according to FCR (Full Cost Reduction) methodologies and is tested and supplied to the customer full wiring and assembly.



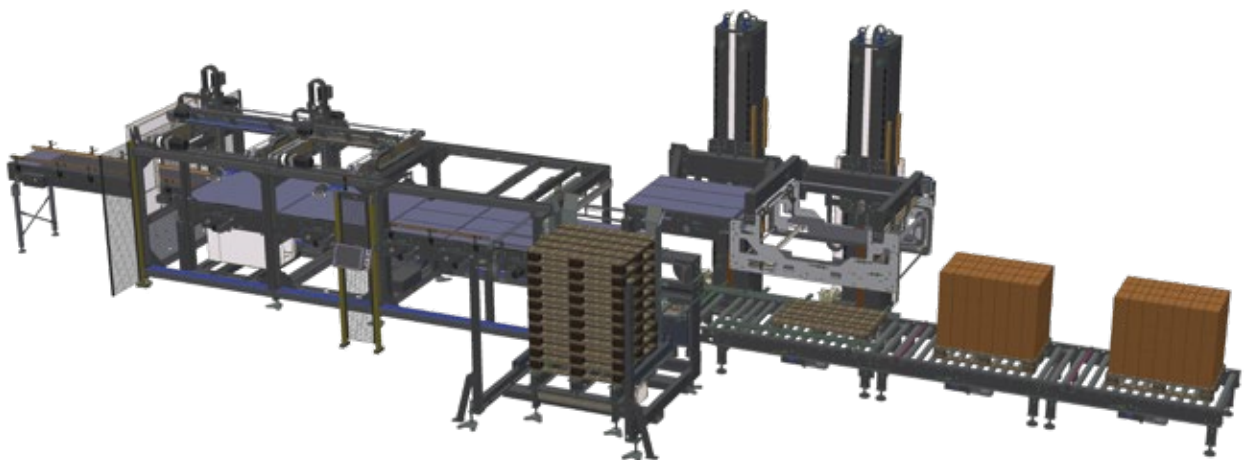


➤ **OPTIONAL PAD FEEDING MODULE**

It is a module composed of the pad magazine and the pad feeding unit with controlled axes, which can be combined with the central column of the APS ERGON palletiser. The pad feeding module is a pad feeding system that can be adjusted according to the different dimensions of the interlayer.



- The accident prevention protections are made of aluminum and polished polycarbonate (PC).
- Production adapts quickly to new formats required by the market.
- Palletising schemes are optimised for truck loading.
- Format changeover times are kept to a minimum.
- The handling of the containers is fluid and avoids damage during handling.
- Use of innovative design solutions in IoT key, which reduce the operator's workload and ensure high levels of plant efficiency.
- Simple and intuitive control of all operations, which can be further optimised with the SWM supervision system for the collection, control and interpretation of production data.
- ICOS motors equipped with integrated digital servo-drive, which ensure production with reduced environmental impact and low energy consumption.



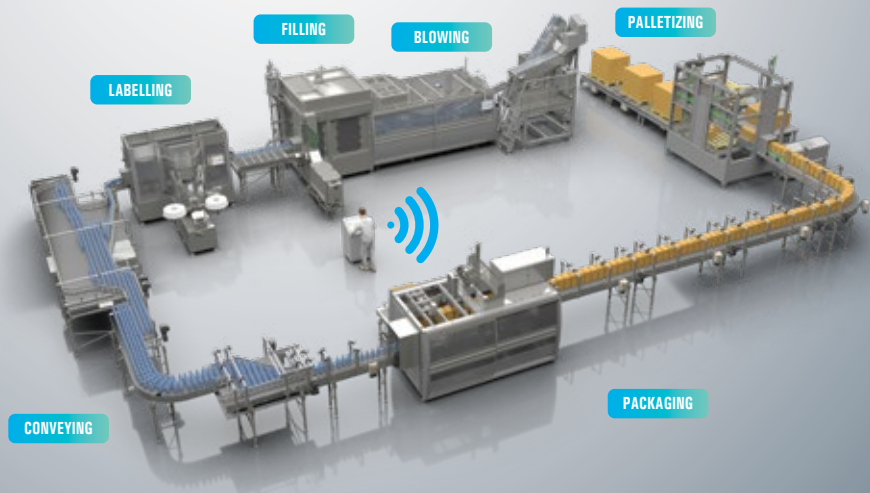
DESIGN WITH US YOUR CIRCULAR PACKAGING



IMPROVING YOUR CARBON FOOTPRINT IS EASY WITH SMI!

Our bottling and packaging systems benefit from Industry 4.0 and IoT technologies, can process recyclable materials such as rPET and allow for considerable energy savings.

Find out our solutions for packing a wide range of containers up to 50,000 bottles/hour.



OUR EXPERIENCE IN THE FIELD OF SECONDARY PACKAGING HAS ALLOWED US TO DEVELOP A WIDE RANGE OF APPLICATIONS THAT CAN BE ACHIEVED WITH THE PICK & PLACE CASE PACKERS FROM THE ACP ERGON SERIES, WHICH, THANKS TO ITS SOLID MONOBLOC STRUCTURE, CAN PACK VARIOUS TYPES OF CONTAINERS IN MULTIPLE TYPES OF PACKAGES.

ONE CASE PACKER...

MULTIPLE APPLICATIONS

DESIGNED
& MADE IN ITALY

ACP ERGON

ACP ERGON

ONE CASE PACKER... MULTIPLE APPLICATIONS

Our experience in the field of secondary packaging has allowed us to develop a wide range of applications that can be achieved with the pick & place case packers from the ACP ERGON series, which, thanks to its solid monobloc structure, can pack various types of containers in multiple types of packages. In the "installation" section of this issue of SMI NOW we have highlighted two practical

cases of packaging made by these ultra-flexible packaging machines: a cardboard box equipped with the PID device for inserting pre-assembled cardboard separators and an application that allows you to insert glass bottles inside plastic boxes. In addition, the ACP ERGON can also be used for other applications, such as cardboard basket packaging presented at Brau Beviale 2023.



ACP ERGON
VIDEO
scan this QR code



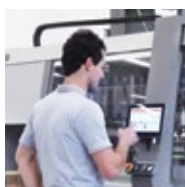
➤ ERGONOMIC MACHINE

The carton magazine of the ACP range, located next to the machine, allows the loading of pre-folded cut-outs in an easy and ergonomic way.



➤ EASY MANAGEMENT AND ADVANCED AUTOMATION

ACP ERGON case packers are equipped with Sercos fieldbus-based MotorNet System® automation and control technology, which ensures full compatibility with Industry 4.0 and Internet of Things (IoT) platforms within the plant



➤ OPERATIONAL VERSATILITY

In addition to glass bottles, the ACP series is able to pack multiple types of containers, such as bags and boxes of pasta, rice and coffee, oval containers or briks, simply by changing the gripper / suction cup. This range of machines is particularly suitable for packaging even very delicate and exclusive products such as wines, sparkling wines and liqueurs, without damaging the labels of glass bottles during the packaging process.



➤ PACKS WITH A PERSONAL TOUCH FOR BRAU BEVIALE

On the occasion of the Brau Beviale trade fair (Nuremberg, 28-30 November 2023), SMI will exhibit an ACP 20 S ERGON case packer to pack 66 cl beer glass bottles in cardboard baskets in the 3x2 format, with adhesive tape closure, at a maximum speed of 20 packs/minute.

The automatic case packers with pick & place system of the ACP ERGON series allow to obtain a simple, effective packaging

suitable for maximising the visibility of the package on the shelves at the points of sale.

The cardboard basket presented at the fair is, in fact, the ideal solution to create a micro-wave cardboard multipack, which guarantees easy graphic customisation of the packaging used for easy handling by consumers, thanks to the integrated handle, of beer bottles (but also cans, PET bottles, etc.).



SMI solutions for secondary packaging are designed to meet the needs of versatility and efficiency and are suitable for packaging various types of containers, even in particular shapes, in packages that preserve their integrity and at the same

time act as a promotional vehicle for the brand thanks to the possibilities of graphic customisation.

In the field of packaging in cardboard boxes, for example, SMI offers a wide range of case packers with wrap-around or pick & place system.

Both solutions produce cardboard boxes that, in addition to being very resistant to impacts for the protection of the products contained in them, are an excellent marketing tool thanks to the wide possibilities of covering the outside with advanced forms of "eye-catching packaging".



PID PARTITION-INSERTING DEVICE

SMI SOLUTIONS TO PROTECT AND PROMOTE PACKAGED PRODUCTS



➤ MAIN ADVANTAGES

- High flexibility of use.
- Better product protection.
- Maximum effectiveness for product and brand promotion.
- Quick process of inserting separators, as these are already pre-assembled.
- Compact and ergonomic solutions.



PID DEVICE
VIDEO

scan this QR code

➤ INCREASED PROTECTION WITH PID

To further protect fragile and delicate containers, such as glass containers, the optional PID (Partition-Inserting Device) can be installed on SMI case packers, this inserts pre-assembled stretched cardboard separators inside cardboard boxes. The PID device can be installed on machines equipped with wrap-around system of the WP and CWP series, on those with pick & place system of the ACP series and on the combined packaging machines of the CM series.



➤ EACH CASE PACKER HAS ITS OWN PID

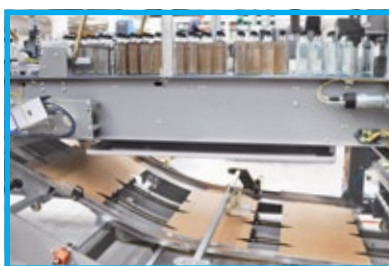
The Partition-Inserting Device is an optional module consisting of a magazine of pre-assembled separators and a system that opens them and deposits them inside the boxes.

- 1) In the case packers with wrap-around system for production up to 40 packs per minute, a mechanical arm equipped with suction cups with vacuum suction picks up a pre-assembled separator from the warehouse, opens it and deposits it between the containers below before they are grouped in the desired package configuration.
- 2) The case packers with wrap-around system for productions exceeding 40 packs per minute are equipped with a double mechanical arm system. Both arms perform the same operations at alternating rhythms and in a synchronised way. This application allows higher speeds to be reached, as while the first arm is in the deposit phase of the separator between the bottles, the second is in the phase of picking the separator from the magazine.
- 3) In case packers with pick & place system, the mechanical arm equipped with suction cups takes the pre-assembled separator from the appropriate module, opens it and deposits it on top of the bottles previously inserted in the box by the appropriate device. A complementary system then performs a "push down" operation of the newly introduced separator, pushing it to the bottom of the box before it is completely closed.

1 2 WRAP-AROUND



3 PICK & PLACE







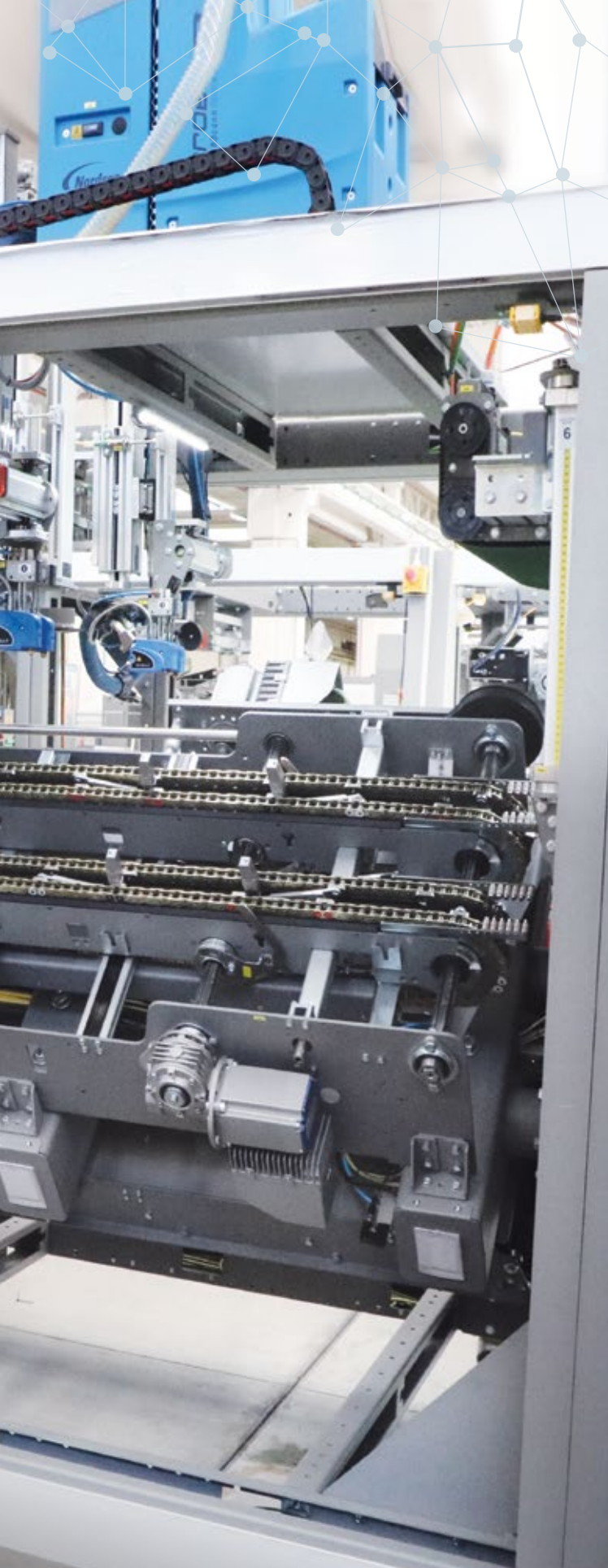
CM-R ERGON

THE FORMAT CHANGE REVOLUTION

The frequent changes in consumer habits and preferences impose new competitive challenges and great adaptability to create packaging solutions suitable to intercept every market demand.

This can only be achieved thanks to versatile bottling and packaging plants, which quickly and easily switch from one type of production to another thanks to advanced automation and intelligent technologies.

SMI's experience in end-of-line packaging has led to the development of increasingly efficient solutions, such as the innovative revolving quick-format changeover system, which allows you to quickly switch from a film-only packaging to a tray + film or wrap-around box without any manual intervention for the replacement of pieces or the adjustment of machine devices. In fact, everything happens automatically.



BEFORE



AFTER

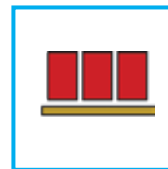
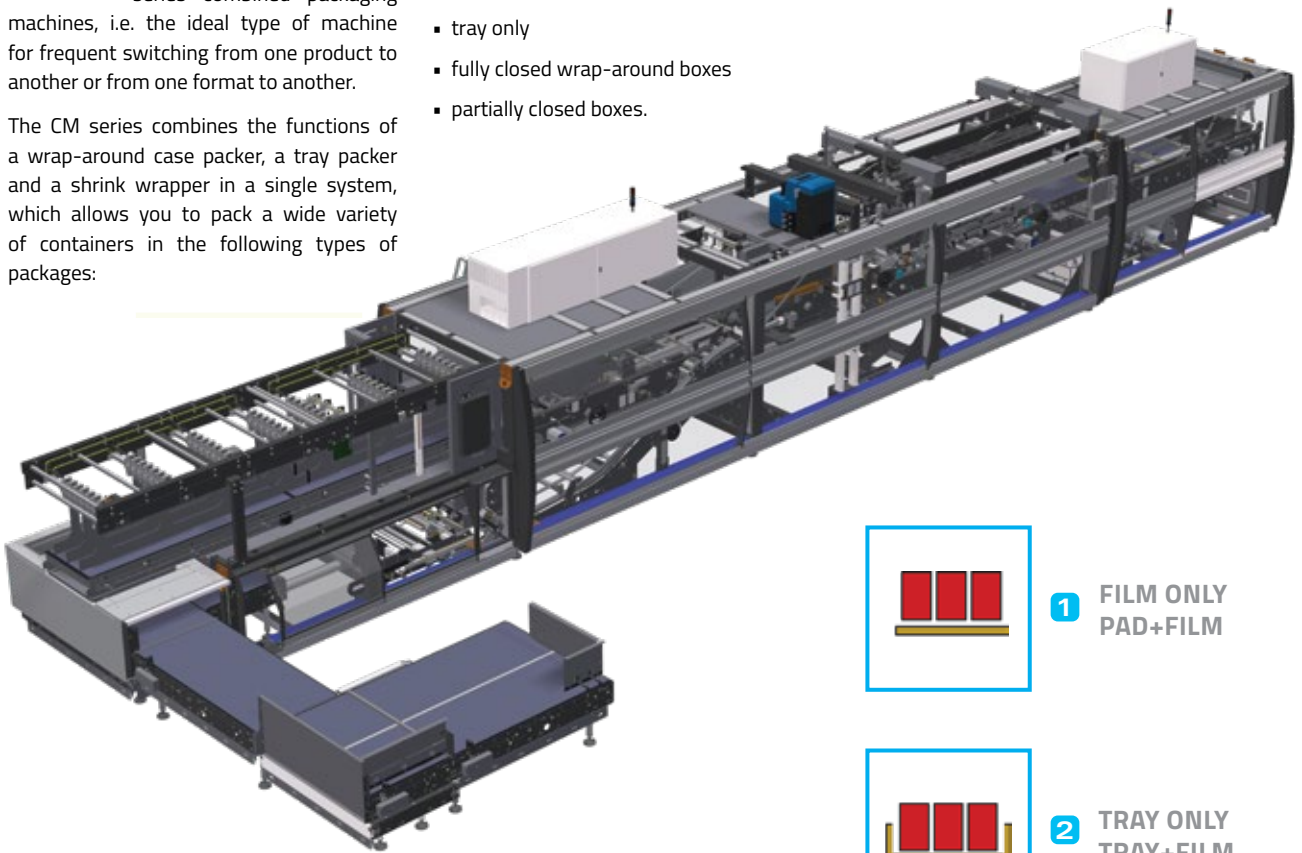
CM-R ERGON

QUICK FORMAT CHANGEOVER THANKS TO THE INNOVATIVE SWIVEL SYSTEM DESIGNED BY SMI

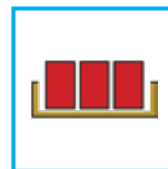
The innovative system ensures maximum advantages when applied to SMI CM series combined packaging machines, i.e. the ideal type of machine for frequent switching from one product to another or from one format to another.

The CM series combines the functions of a wrap-around case packer, a tray packer and a shrink wrapper in a single system, which allows you to pack a wide variety of containers in the following types of packages:

- film only
- flat cardboard pad+film
- tray+film
- tray only
- fully closed wrap-around boxes
- partially closed boxes.



1 FILM ONLY
PAD+FILM



2 TRAY ONLY
TRAY+FILM



3 WRAP-AROUND
CASE





BEFORE



➤ WHAT IS THE REVOLVING FORMAT CHANGEOVER

It is a quick format changer installed in the tray/box forming machine that drastically reduces the time required to change the type of package, especially to switch from a film-only pack to one with tray + film or wrap-around box.

allows you to change the configuration of the machine simply by turning the revolving module by 180 degrees, without the need for any mechanical manual adjustments for format changes.

➤ HOW THE NEW SYSTEM WORKS

The packaging machine equipped with a revolving system is supplied with double equipment on the forming machine module:

- 1) on one side there is the equipment with the passage plate necessary for working film-only;
- 2) on the opposite side, or rather in the area below, there is the equipment to run trays or wrap-around boxes.

When you have to switch from one working condition to another, simply rotate the module 180° thanks to an innovative rotating fifth wheel system, which brings the equipment required by the new format, to the main work surface, while the stand-by system remains hidden in the lower part of the system. This rotation system therefore



AFTER



➤ MAIN ADVANTAGES

- drastic reduction of format change times
- no manual mechanical intervention for machine reconfiguration
- greater precision, because the former is already prepared to process the new type of packaging
- greater production efficiency for customers who need frequent switches between running film-only and tray or box
- reduced maintenance and installation costs
- the device can be installed both on the combined packaging machines of the CM series and on the shrink wrappers of the SK T series



REVOLVING SYSTEM

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AL AHRAM BEVERAGES' SPECIAL CAKE

The unexpected surprises and gestures that come from the heart, are undoubtedly the situations that testify to joy and satisfaction much more than words. The special cake prepared by Al Ahram Beverages and the surprise party organised to celebrate the completion of the installation work of the new SMI CSK 40 T ERGON packaging machine, is an example of customer satisfaction, that makes us proud of our role as a partner. Al Ahram Beverages, Egypt's leading beer producer and part of the Heineken group, turned to SMI for the installation of a shrink wrapper dedicated to shrink film packaging of packs of sleek cans.



RECORD 2022 FOR PACKAGING MACHINES

The automatic packaging machine sector in Italy, marks a new historic milestone: in 2022 the sector recorded a total turnover of 8 billion and 537 million euros, an improvement of 3.6% on the previous record of 2021. If we consider the period 2019-2022, the turnover of the sector has grown by about half a billion in just 4 years. Progress that took place despite the Covid pandemic, with the relative negative consequences on a global scale that we all know well.

This data was announced as part of the Annual Assembly of Members by the Mecs – Ucima Study Center in the 11 ^

National Statistical Survey, which every year photographs the trend of the sector. For the analysis, 616 companies were surveyed, which have over 37 thousand employees.

(Source Ucima)



SMI STRENGTHENS ITS DIRECT PRESENCE IN FRANCE

The French market continues to show strong growth in the bottling and packaging of beverages, food and household and personal care products.

As part of its strategy of continuous customer service, improvement, SMI is pleased to announce the opening of the new branch SMI FRANCE S.A.S. in the city of Schiltigheim, in the metropolitan area of Strasbourg, capital of the Grand Est region and important logistics hub on the border with Belgium, Luxembourg, Germany and Switzerland.

The new structure will allow SMI to follow

the many existing and future customers in the region more closely, in order to provide them with more efficient and faster support in sales, technical assistance and the supply of spare parts.

For the management of the new branch, SMI has chosen Alain Mattes, a packaging professional, who has previously held positions of responsibility in important companies in the sector.

SMI FRANCE also avails itself of the expertise of local staff involved in commercial activities and after-sales service.



INCREASE EFFICIENCY WITH REMOTE MONITORING

Companies that manufacture and market consumer goods, require intelligent, integrated line solutions that reduce operating costs and provide greater operational flexibility. The continuous innovation of SMITEC, part of the SMI Group, has led to the development of optional solutions for monitoring the operating conditions of the machines, present in a bottling line. Thanks to these systems, the operating parameters of the individual units are detected by smart sensors, sent to a central IOT platform and processed through sophisticated algorithms aimed at quickly identifying any degradation of the equipment. Whenever a change in the health status of the machine is detected, the "condition monitoring" software sends a notification to SMI, so that the current situation and the possible need to intervene on site can be assessed remotely. This solution also includes an automatic notification mechanism that allows you to highlight machines that are close to scheduled maintenance interventions.

Key benefits of remote monitoring:

- reduced downtime due to breakdowns
- reduced maintenance costs
- longer life cycle of machines and components.



PROPAK EAST AFRICA 2023



THE PROUD SYMBOL OF EAST AFRICA AND THE MEETING WITH THE PRESIDENT OF THE ITALIAN REPUBLIC, SERGIO MATTARELLA

Propak East Africa, which was held last March 2023 in Nairobi, is a fast-growing fair, as is the country that hosts it, Kenya.

Kenya is gradually establishing itself as the fourth largest economy in all of Sub-Saharan Africa after Nigeria, South Africa and Angola. In 2021 this country imported packaging machines for a total value of 31.2 million euros and Italy ranks second among its commercial partners.

SMI could not miss this important trade fair dedicated to the packaging, processing, plastics and printing sectors of East Africa; a participation of great strategic value to be able to meet the increasing number of companies interested in bottling and packaging technologies offered by SMI.

The participation in Propack East Africa also reserved a wonderful surprise for all the SMI staff present at the 2023 edition... the meeting with the President of the Italian Republic, Sergio Mattarella, who was in Kenya for a state visit and wanted to meet the Italian exhibitors during a ceremony held at the Embassy of Italy.

***Below:** on the occasion of the evening organized at the Italian Embassy in Nairobi, the President of the Italian Republic, Sergio Mattarella, meets Giorgio Bonafede, Sales Area Manager of SMI.*



SMI S.p.A. Headquarters

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

SMIPACK S.p.A.

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

ENOBERG S.r.l.

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

SMIMEC S.p.A.

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

SMITEC S.p.A.

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

SMILAB S.p.A.

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

SMI USA Inc.

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

SMI Centroamericana S.A. de C.V.

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

SMI do Brasil Ltda.

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

SMI (UK & Ireland) Ltd

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

SMI France SAS

Schiltigheim, France
Tel.: +33 6 07 98 27 98

OOO SMI Russia

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

SMI East Europe S.r.l.

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

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

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

SMI Machinery Beijing Co.Ltd

Beijing, People's Republic of China
Tel.: +86 10-87162766

SMI Asia Services Sdn. Bhd.

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

SMI Machinery India Pvt. Ltd.

Goregaon, Mumbai, India
Tel.: +91 98194 44932

