SIPA SPEAKS

SIPA

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THE FUTURE OF PACKAGING

In this issue of SIPA SPEAKs, we take a look at key themes driving progress in PET packaging – and beyond. In alphabetical order, they can be summed up thus: digital services, packaging solutions, process integration, product innovation, sustainability.
Digital services from SIPA are the latest demonstration of what is possible with interconnectivity. SIPA has always been strong on partnerships along the value chain, and the Echo System service platform will enable those partnerships to grow. We say the services are digital, because they are computer-based, and a lot of it is about enabling individual pieces of equipment to talk with each other: XDATA for example is an innovative solution designed to enhance manufacturing performance, with a supervisor providing essential information to speed up processes, improve quality with continuous analysis, spot operating problems, and deal with them in real time. But there is a lot of humanity behind the Echo System. With the XRAY element, for example, customers can benefit from "augmented reality" remote interventions that virtually put a SIPA technician next to their equipment, even though the technician could be on the other side of the world.
Another one of SIPA's strengths is in integration: conceiving, developing, and delivering fully multi-functional production systems that exactly fit the requirements of customers. Latest example of this power of integration is Xtreme Renew Sincro Cube, a system for creating filled and capped bottles from 100% rPET flakes in a single step. It starts with the revolutionary XTREME Renew system for injection-compression molding of preforms directly from rPET hot washed flakes. Preforms then pass directly to an XTRA unit that stretch-blows the bottles, and then finally, the bottles are filled and sealed. It is the ultimate demonstration of SIPA's strengths in using advanced engineering to devise fully integrated and highly flexible systems that pose almost no limit on customer needs and imaginations. When it comes to the containers produced by its customers, SIPA's approach goes well beyond what is normally expected of a processing equipment supplier. Complementing its capabilities in systems to produce preforms and containers, fill, seal, package and palletize them, SIPA has an enhanced ability to carry out preform and container design and development.
With a network of design centers across the world, a global team of experts can produce designs that take into account what a bottle or jar will contain, what specific markets it is aimed at, what the sales strategy of the customer is, and much more. They can apply their expertise not only to the container, but also to the material, the label and/or other forms of decoration, and even the secondary packaging. SIPA helps its customers to develop and produce containers that are designed for recycling, and which can contain all the way up to 100% post-consumer recyclate, rPET.
Governing everything we do, whether it is related with the machines that SIPA makes or the containers that our customers produce, is an over-riding attention to sustainability and the wellbeing of the planet and the people who live on it. These are not empty words, this is not greenwashing. SIPA has demonstrated time and again that it is at the forefront of global efforts to produce packaging efficiently, reduce waste, and recycle used material.
In previous issues of SIPA SPEAKS, we have already discussed the new brand, AWArPET, which stands for an environmentally conscious approach to the design and production of PET packaging. We continue to develop this brand.
Wherever the company goes – to visit customers, talk at conferences, exhibit at shows, SIPA will highlight its multiple capabilities to reduce consumption of materials, energy, water, and compressed air, and to create containers that use the highest levels of recycled PET– and which are fully recyclable, not only in principle, but in practice too. As we continue to experience global environmental, social, and economic conditions heading towards new extremes, we believe we all have a responsibility in trying to keep planet earth on course for a sustainable future.

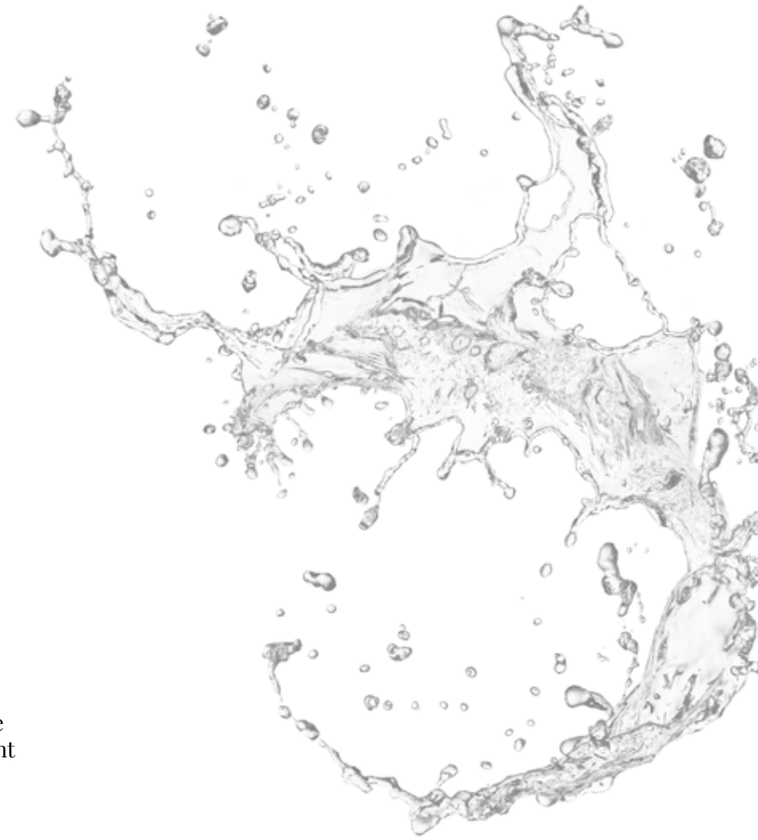
AROUND THE WORLD:

news from the different continents.

ÁGUA MONCHIQUE AND SIPA INNOVATE TOGETHER

PORTUGAL

Portuguese mineral water supplier Água Monchique has called on SIPA in its bid to bring new levels of innovation to the sector. With the help of a new XTRA 8 high-efficiency rotary blow molding system, an existing SFL 6/4 XL linear blow molding system, and expert SIPA assistance in bottle design, Agua de Monchique has introduced two new ranges, one for the mass market, and one for the boutique sector – both very elegant and making use of the latest processing technology.



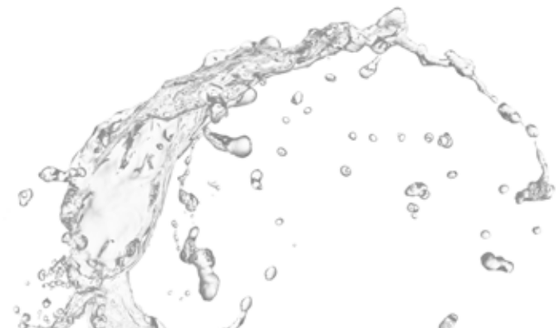
The company taps into a source 900 meters deep in Caldas de Monchique, in Portugal's beautiful Algarve region, which yields water with a high level of mineralization, and with a pH of 9.5 – super alkaline!

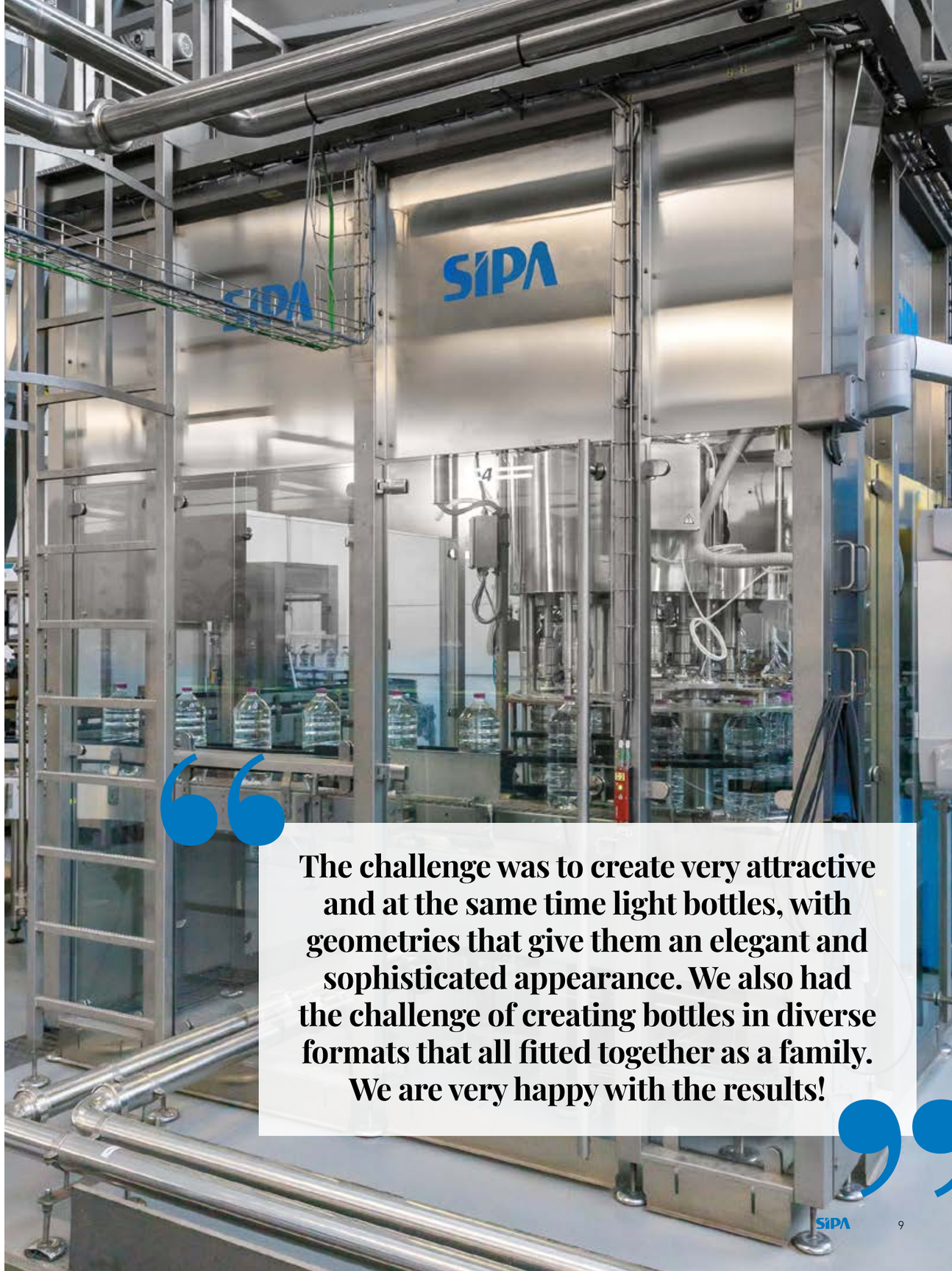
Água Monchique uses SIPA's two production systems to make bottles in seven different formats. The "regular" Monchique range is available in five sizes, from 340mL through to 5L, all with simple and attractive designs. The XTRA 8 produces the smaller sizes and it is coupled and synchronized with a SIPA Flextronic S equipped with 20 filling valves for a nominal productivity of 20,000 b/h.
The SFL 6/4 XL, operating in a SincroBloc set-up with a SIPA Bigfill volumetric gravity filler, is used for the 5L bottles. The 5L bottles in particular stand out for their low weight: they have been validated at 66 and 64g, which is close to 10g lighter than the norm in Portugal.

The up-market Chic range comes in two sizes, 500mL and 1L, with a "minimalist" look, in four colors: crystal (translucent white), cobalt blue, red and turquoise.

Both families are produced using 30% recycled PET; Água Monchique had originally set itself the goal of using 25% rPET by 2025, but it has more than achieved its aim five years ahead of time. It is now working towards using 100% rPET.

"SIPA contributed some great design and engineering work for the new bottles, working together with an external design agency that curated the labels and the coordinated image," says Mr. Vítor Hugo Gonçalves, CEO of Água Monchique. "The challenge was to create very attractive and at the same time light bottles, with geometries that give them an elegant and sophisticated appearance. We also had the challenge of creating bottles in diverse formats that all fitted together as a family. We are very happy with the results!"





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ALSAD

KINGDOM OF SAUDI ARABIA

MAJOR SAUDI CONVERTER AL SAD BENEFITS FROM SIPA'S PREFORM TECHNOLOGY AND SUPPORT

Saudi Arabian preform and bottle cap producer Al Sad is a big fan of XFORM from SIPA. It now has four GEN4 versions of the 500-tonne system making PET preforms for mineral water bottles. It also has one of SIPA's unique 180-cavity preform molds.

At its plant in Riyadh, Al Sad produces PET preforms in four different weights: 7.9g, 8.5g, 9.1g, and 10.4g. Every day, the four XFORMS together produce over 10 million preforms.

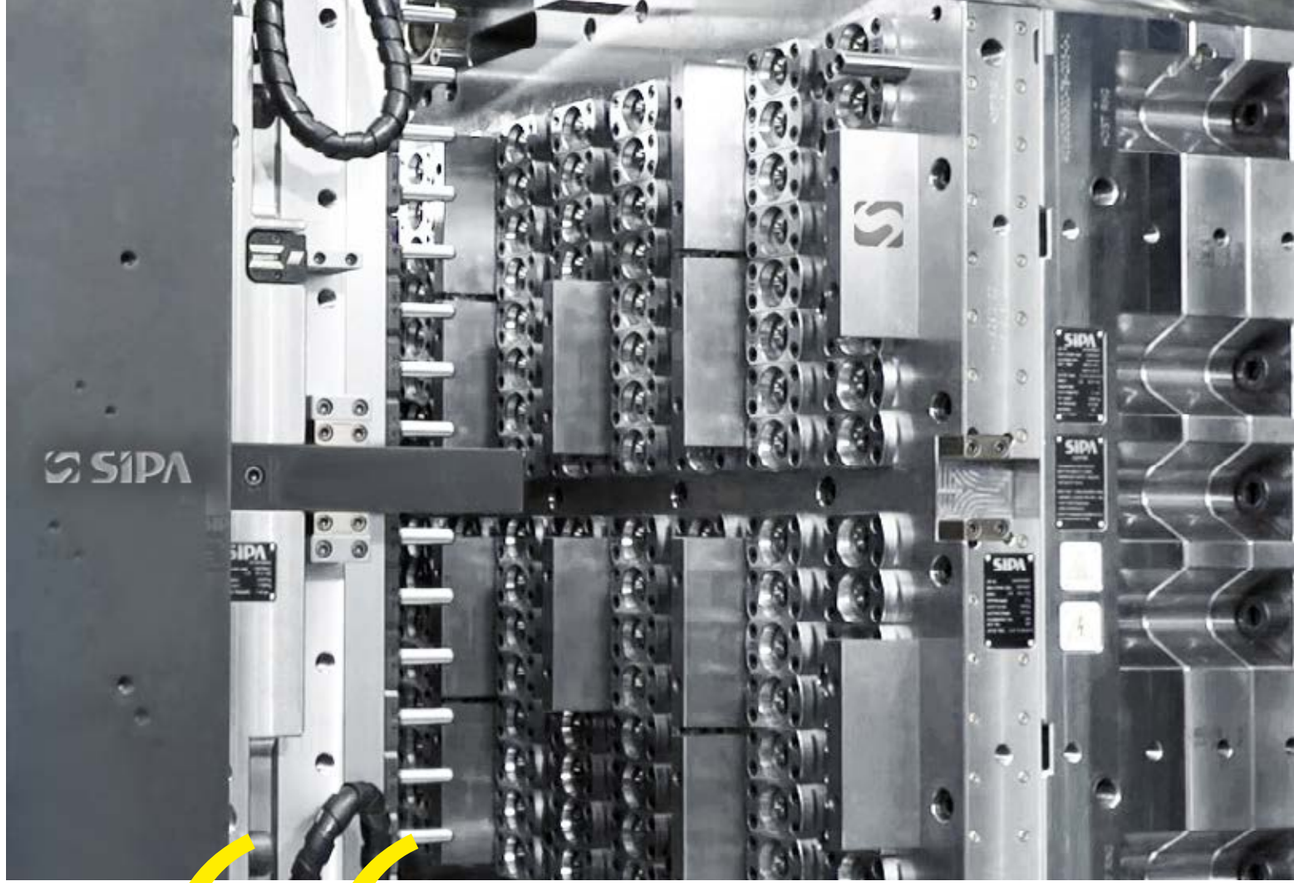
Al Sad Vice President Zeid Al Nazer says the company values XFORM for its high productivity and short cycle times, and also because of its low energy consumption, its very high overall efficiency, and its low physical footprint. Al Sad also appreciates SIPA's responsiveness and after-sales service.

A key advantage of the XFORM system is the unparalleled production cost that it offers, especially when it is running with a 180-cavity mold. But whatever the mold it is holding, the XFORM always scores high in numerous performance categories. For example, one factor especially important at this time is its excellent energy efficiency. XFORM consumes less than 200 Wh for every kg of PET it processes. Numerous factors make this possible, but highlights among them include the machine's all-electric toggle and the KERS Kinetic Energy Recovery System – not unlike that used in Formula One racing – that stores braking energy and then reuses it to accelerate clamp closing. Servo-driven hydraulic pumps and optimal insulation on the extruder barrel also play their part.

Other important features are the well-known robustness of XFORM, which manifests itself in low maintenance costs. This extends beyond the machine itself to other important elements of the total system: SIPA's guarantee for the cold half of the mold, for example, covers no fewer than eleven million cycles.

High uptime is further ensured by low mold changeover times made possible by ease of access to the mold and PMC (Post-Mold Cooling) area. High preform quality and consistency (shot-to-shot weight variation is under 0.025%) are further advantages that all add up to the low TCO (Total Cost of Ownership) of the system.

Al Sad was impressed by the ability of the SIPA team to install the most recent system and put it into operation during some of the most difficult months of the global COVID-19 pandemic. Says SIPA Sales Area Manager: "We put an almost incredible amount of effort in making sure that everybody involved in the project was kept safe during the installation period. Regulations and norms in operation at the time were extremely strict, and obviously we abided by them all. But we still got the job done in the allotted time."



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BOTTLEONE PARTNERS WITH SIPA: GETTING AN INTEGRAL HANDLE ON PET PACKAGING

USA

This could be the beginning of another new chapter in the story of PET packaging. BottleOne in Atlanta, GA, thinks technology that it has developed could lead to large HDPE bottles being replaced by higher performance versions in PET with fully integral handles. SIPA is helping it, with equipment to make the special preforms and to blow the beautiful bottles. SIPA is currently developing several new unit cavity preforms.

The development of the PET bottle with an integral PET handle – which is also called BottleOne - took nearly a decade. It is protected by multiple patents. The initial patent has been approved in eight countries and is now pending in over 20 countries.

For decades, designers and packaging makers have been trying to figure out how to create a cost-effective, one-piece, PET bottle with a handle for mass production. After 55 years of HDPE gallon and half-gallon jugs, it's here.

BottleOne PET bottles are made by first injection molding the special preforms which can be provided on the SIPA XFORM system, and then stretch-blowing the preforms on a SIPA SFL linear unit. Since the handles are an integral part of the preforms, no ancillary equipment is required to apply or attach the handle, although the technology incorporated into the preform heating ovens and the bottle molds is particularly sophisticated. The handle itself has a unique two-point attachment, which provides for extra strength and durability.

For bottle producers, fillers, and consumers, PET provides numerous advantages in terms of sustainability over HDPE. For example, machine output is far higher, at up to 5000 bottles per hour per cavity, so less equipment is needed. This helps bring down energy consumption by as much as 40%.

Size-for-size, a handled PET bottle is lighter than an HDPE one, even though HDPE is less dense, because PET is inherently mechanically superior and so wall thicknesses are much lower. Full PET bottles are much less likely to fracture when dropped, too. Obviously, PET bottles are much more attractive, since the material can be made crystal clear.

Independent top load strength tests have shown that BottleOne was far superior to HDPE bottles in a side-by-side evaluation of one gallon bottles. Virginia Tech has validated BottleOne to have a higher retention of riboflavin (flavor), vitamins, and dissolved oxygen (potential for longer primary shelf life).

"The extraordinary strength and durability of BottleOne containers can be leveraged to stack more, and higher," says BottleOne. "One user went from four layers on a pallet to five layers on a pallet, and stacks of two pallets in the same space formerly used for one pallet of HDPE bottles."

Extrusion blow molding with HDPE does make it easier to incorporate handles into larger bottles, but for many years now, SIPA has been providing numerous options to incorporate grips and handles into medium-sized and large PET containers. Now, with the technology developed by BottleOne, the options have increased, and the advantages of PET are even more striking.

BottleOne bottles are 100% PET, and so making them extra-easy to recycle without contaminating the waste stream. With the SIPA equipment and the use of latest recycling technologies, it is even possible to make the bottles out of 100% post-consumer recycled PET, rPET.

BottleOne provides a royalty free license for the technology to make PET bottles with integral handles. Preforms are supplied through the BottleOne system which utilizes SIPA technology: preform tooling and highly energy-efficient XFORM Gen 4 preform production systems.

SIPA can supply licensees (as well as producers of other types of handled containers, obviously) with packaging design and development, and best-in-class SFL EVO linear stretch-blow molding systems that can produce bottles up to 5L in volume.

BottleOne production technology holds numerous cost-saving benefits for bottle makers. The overall process is simplified, for example, since there are no separate steps for producing and inserting separate handles. Using SIPA equipment for making preforms and bottles, processors gain all the advantages derived from a one-stop shop – not just the machines and molds, but also design, development and prototyping services.

PET bottles with integral PET handles present brand owners with new ergonomics and new opportunities. BottleOne bottles have been designed so that they are very easy to pour, for example. They look great, improving the marketability of the product. And they can be used for many types of liquid: milk is probably the most obvious one, especially in the USA, where until now HDPE has been virtually the only game in town. Then there are edible oils, all sorts of juices, and then in the non-food sector the long list of possibilities includes fabric softeners, detergents, all sorts of home care products, and many more.

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USA

Premium Waters, Inc.
bottled water solutions

PUTTING A PREMIUM ON PREFORM MOLDING – WITH XFORM

Major US water bottling company Premium Waters likes XFORM from SIPA – a lot! The company, headquartered in Minneapolis, last October invested in an XFORM 500 Gen4 system with a 128-cavity mold, which was delivered early this summer. Then this February, it opted for an XFORM 350 Gen 4 with a 96-cavity mold, and this is due to follow closely behind. These two orders bring Premium Waters' fleet of SIPA XFORM machines to seven. Last year, it took delivery of another XFORM 350 Gen4, complementing three existing XFORM 500 systems, and one XFORM 300. Premium Waters was in fact the first company in the world to put in an order for XFORM, very soon after the system debuted at the NPE expo in Orlando, Florida, back in 2012. Premium Waters is a long-time valued partner for SIPA. Over the years, SIPA has provided it with over 25 systems of various types, for production of bottles as well as preforms, in various locations where Premium Waters operates. Back in 2012, Premium Waters executives said they were impressed with the technology and the robust build of the new machine. They liked the energy efficiency numbers, and they liked being able to use any of their existing molds with few modifications to react to volume changes. All those factors hold true today. Plus, with the introduction of each new generation, even more reasons to choose XFORM have been added. Today, XFORM Gen4 delivers the lowest conversion cost of any PET preform production system, alongside unmatched speed, flexibility and ease of use. When it comes to PET preform tooling, there is often a lot more to it than just the mold. Indeed, one of the latest improvements is to preform handling after molding: the XFORM system not only accepts non-SIPA molds and EOATs, it also accepts pin plates for preform cooling and removal coming from alternative suppliers.

Premium Waters knows a thing or two about bottling water. It got its name in 1994, but its roots go all the way back to 1870. Today, through organic growth and acquisitions, it has operations in several states in the USA. Premium Waters brands now include Chippewa Spring Water, Glacier Clear Purified Drinking Water, Glenwood-Inglewood Spring Water, Kandiyohi Premium Water, Nature's Crystal, and Nicolet Natural Water. Premium Waters is also a major private label supplier.

"The mission of Premium Waters is to succeed as a high quality, low cost bottled water supplier in the markets we serve by focusing on the customer, by driving out costs in everything that we do, and by not wavering in our drive for delivering the highest quality product at good margins," they state on their website. And SIPA is with them all the way.

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POLYOAK GOES BIG IN BOTTLES WITH SIPA

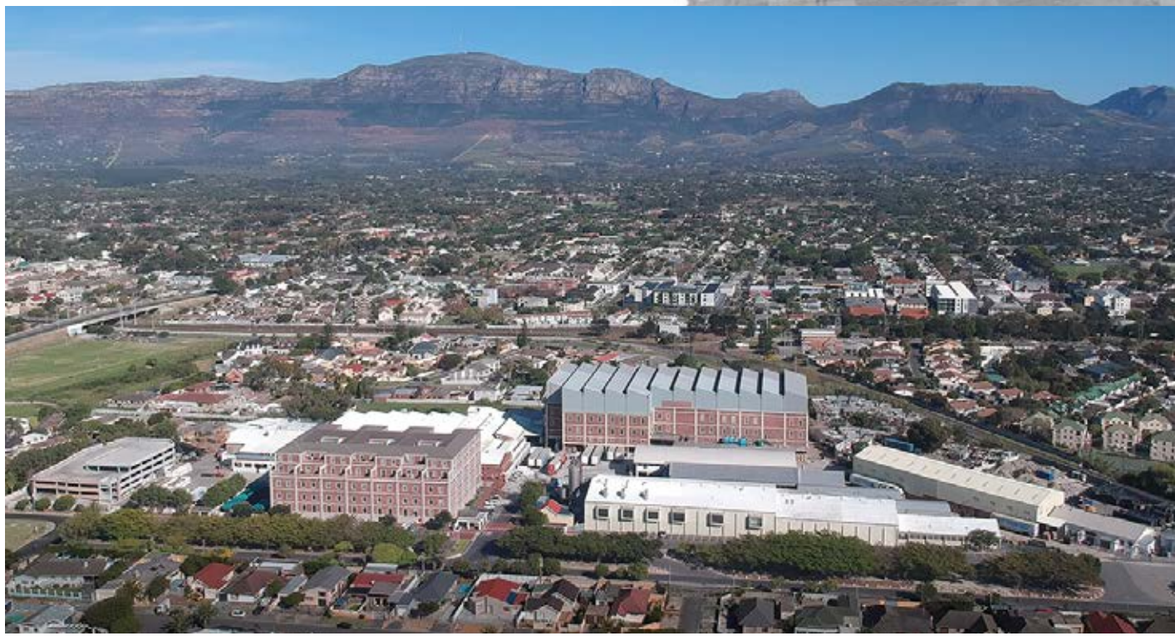
POLYOAK PACKAGING

SOUTH AFRICA

Major South African packaging company Polyoak Packaging is moving into new territory with SIPA. It has taken a SFL EVO 6/4 XL linear stretch-blow molding unit to make bottles up to 10L in volume at its plant in Johannesburg.

With headquarters in Cape Town, Polyoak Packaging produces bottles for juices, mineral water, and edible oils. At other locations in Southern Africa, it already has no fewer than seven SFL linear stretch-blowing machines making smaller bottles, as well as eight SIPA injection molding machines producing PET preforms.

The new SFL EVO 6/4 XL is already in operation, producing 5L bottles in different shapes for water, juices, and oils, alternating with 10L bottles for multiple products. It can produce as many as 1600 10L versions every hour, and for the 5L size the rate rises to 4,800 bph.



We can maximize the output on our 5-L bottles, which are already best-sellers, and we can use the same machine to test the market for water and other products in 10-liter bottles without having to make a major investment.

Gary Bloom, Regional Executive at Polypet (Polyoak PET Division) says the SFL EVO 6/4 XL was chosen above all for its flexibility, blowing 5L bottles in four cavities and 10L bottles in two cavities. “We can maximize the output on our 5L bottles, which are already best-sellers, and we can use the same machine to test the market for water and other products in 10-liter bottles without having to make a major investment,” he says. The blower is equipped with QuickChange configuration that makes preform neck change a “walk in the park”.

On top we have GreenOvens that reduce power consumption and make bottle production cost extremely competitive. Polyoak is one of the bigger packaging converter in Southern Africa, with manufacturing plants around the country and neighbouring countries. It has been partnering with SIPA for around 15 years.

INDIA

INDIAN PEPSI BOTTLER SETS SITES ON FURTHER EXPANSION WITH SIPA

“One of the world’s largest bottling companies for PepsiCo outside of the USA has once again chosen SIPA to help it expand its operations.”

One of the world's largest bottling companies for PepsiCo outside of the USA has once again chosen SIPA to help it expand its operations. Varun Beverages India Pvt Ltd is an official bottler for Pepsi in India, where it has operations all over the country.

Over the last few months, the company, which generally goes by the name of VBL, has been investing in XFORM preform injection molding systems, in XTRA rotary stretch-blow molding, and in Sincro Bloc, the integration of bottle blowing, filling and capping equipment in a single system.

This February, three XFORM 500 GEN4 XP systems, equipped with 180- and 144-cavity SIPA molds, were installed at different locations in India. All the machines are dedicated to production of preforms for PepsiCo carbonated soft drinks, for bottles ranging in size from 250 up to 2250mL. A Sincro Bloc 16-100-15 will be installed in December.

VBL also works for Pepsi in other countries, including Zimbabwe, where it plans to grow its presence. It established a green field production facility in Zimbabwe four years ago, aiming to cater for what it said was "an untapped market with huge potential." With a new XTRA 16, which went into operation in May, it clearly is on the way to realizing that potential.

Two of the key reasons why VBL chose XTRA is its high productivity coupled with low energy consumption. XTRA can produce more bottles per cavity than any other stretch-blow molding machine in its category, thanks in large part to its very wide process angle (200 degrees), leading to a top-of-the-class TCO.

VBL produces and distributes a wide range of carbonated soft drinks (CSDs), as well as a large selection of non-carbonated beverages (NCBs), including packaged drinking water sold under various PepsiCo trademarks. It has been associated with PepsiCo since the 1990s, and now has franchises for various PepsiCo products across 27 States and 7 Union Territories in India. VBL has 31 manufacturing plants in India and six more in other countries.

TING HSIN SIGNS UP FOR SIPA ONCE AGAIN

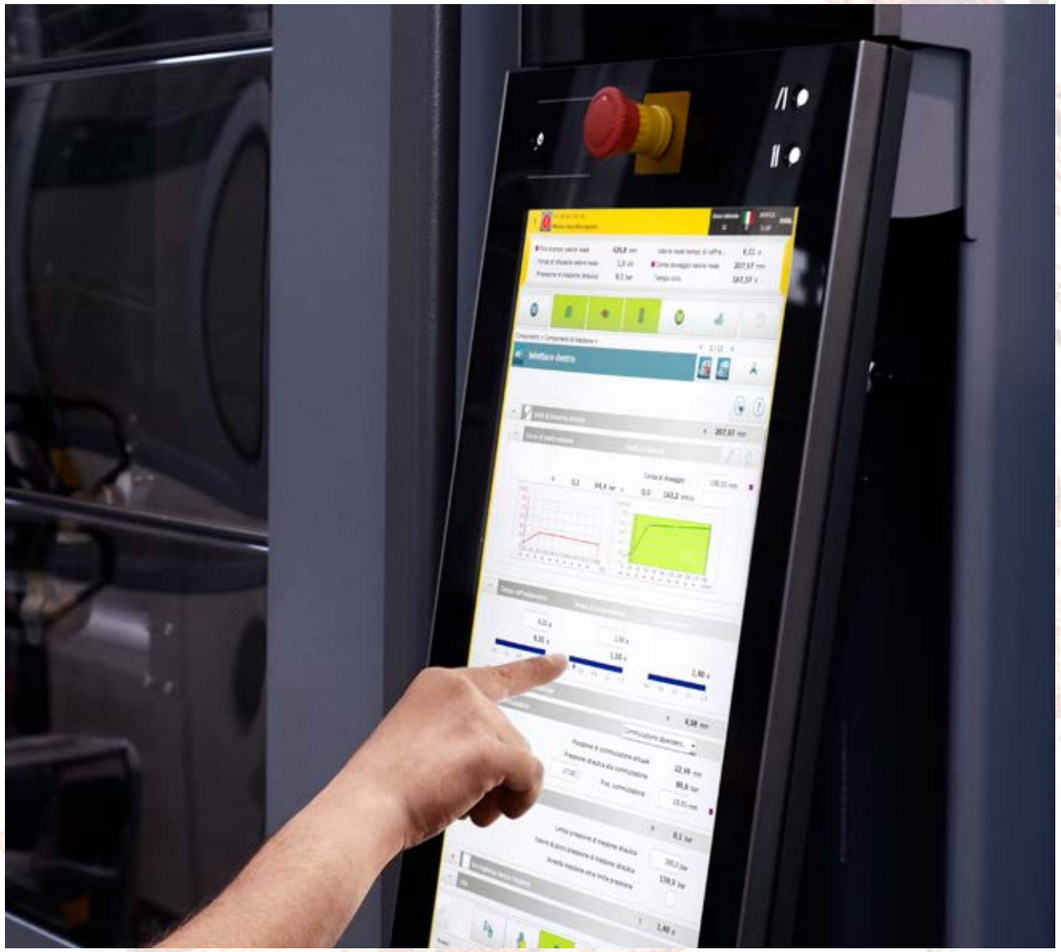
顶新国际集团
TING HSIN INTERNATIONAL GROUP

CHINA

Ting Hsin International Group is one of SIPA's longest established partners in Asia. Since the Taipei, Taiwan-based food and drink company first invested in SIPA solutions in 1997, it has acquired many ECS injection-stretch-blow molding and SFR rotary blowing systems. Last year, it took the step into SIPA preform injection molding technology, with the acquisition of three XFORM GEN4 units which are operating in mainland China, all of them equipped with 144-cavity molds.

With all the experience Ting Hsin has in working with SIPA, it appreciates the advanced processing technologies that the company has always offered. Over the last six years, the two companies have also cooperated successfully in preforms and bottles molds. SIPA has successfully provided Ting Hsin with new innovative and advanced preforms and bottle design as well as mold refurbishing. The partnership works well, thanks also to effective communications. It's something that both companies want to keep going and build on. With SIPA advanced technology and effectiveness of injection machine design, the lower energy consumption has been

confirmed by field test result. The energy used to power the clamp system is recycled using a Kinetic Energy Recovery System, while servo drives on the hydraulic pumps also help keep consumption lower. XFORM GEN4 is also the easiest XFORM yet to maintain. Special features that make this possible include accumulators mounted on a pull-out rack inside the machine frame. In addition, the oil tank is designed so that it does not need to be emptied in case of maintenance.
When it comes to molds, SIPA has the extra advantage of having an operation workshop in China, Hangzhou City, for manufacturing and maintenance. “That makes SIPA very competitive especially on short lead time” the team notes.



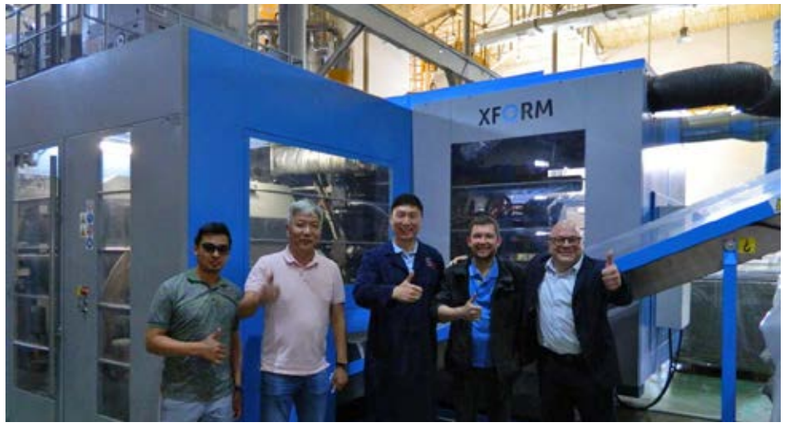
> That makes SIPA very competitive especially on short lead time

JV OIL GETS THE MOST OUT OF SIPA

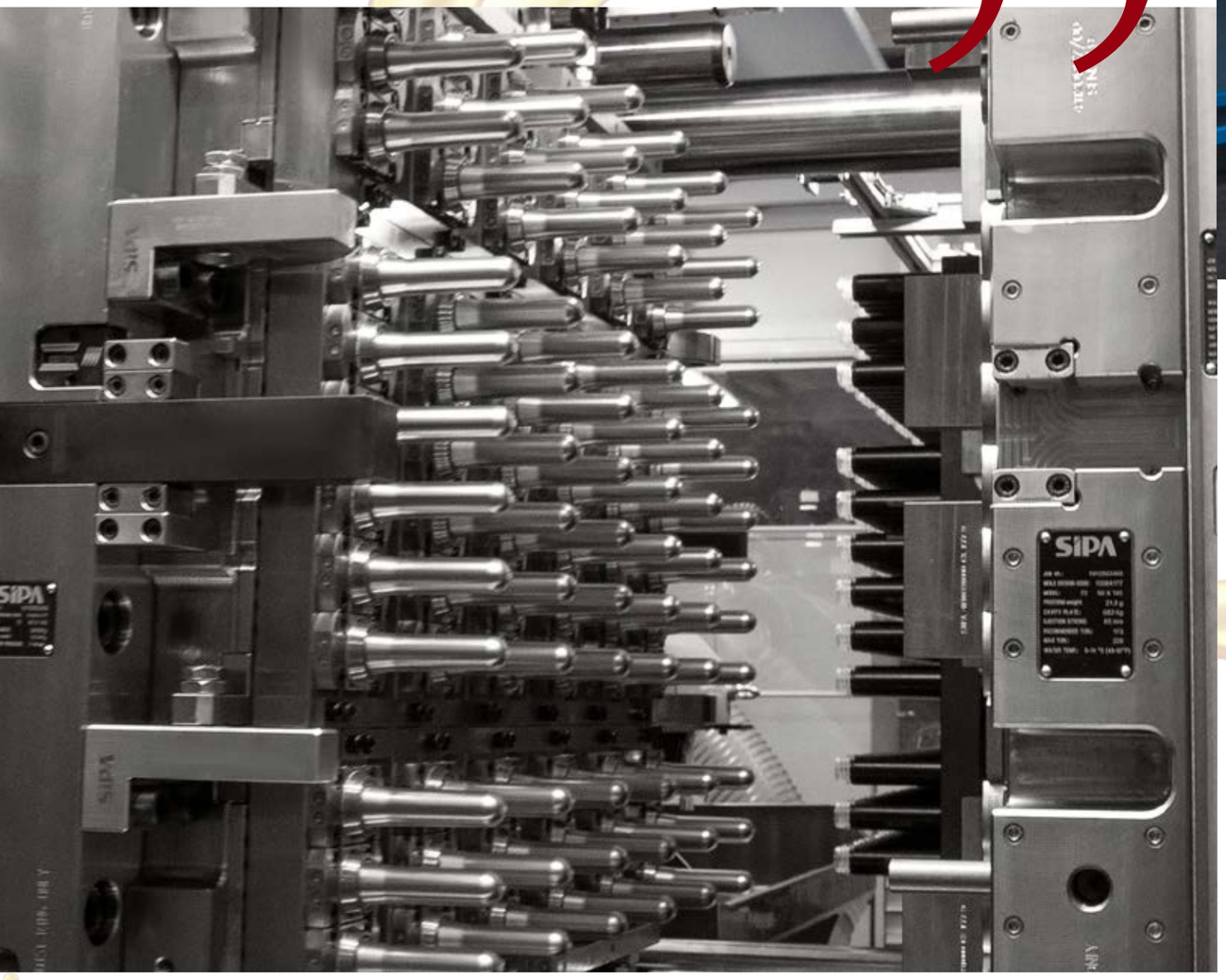
GROUP OF COMPANIES
SIYOB

UZBEKISTAN

Deep in Central Asia, SIPA is finding great success in sales of equipment and molds. Over the last five years, the company has completed close to 50 mold projects in Uzbekistan alone. One important customer is SIYOB, a major food, drink, and consumer goods group. It has been making important investments, via its Oil Extraction joint venture close to Uzbekistan capital Samarkand, in XFORM preform injection molding systems as well as in complete injection molds, cold halves and in conversions. SIPA molds are now running not only on XFORM machines, but also on equipment from other major suppliers.
SIPA installed its first XFORM system at Oil Extraction, an XFORM 350Gen 3, in 2018. Last year, it added an XFORM 250 Gen4. Plus, says Leonid Nim, SIPA's local Sales General Manager, "this single customer has come to SIPA for more than 30 tooling projects since 2018. SIPA molds make preforms in multiple formats for different applications: water, CSD, edible oil, tea, and more." Not only do SIPA molds run on machines of different brands, but XFORM is also fully compatible with legacy tooling from other mold makers.



> XFORM has brought several advantages to our customer, - says Nim. - It obtains fast cycle times, using even a three-position EOAT plate, and there is lots of room in the robot area to make changeovers fast and hassle-free.



SIYOB prefers SIPA equipment not only because of its top quality but also because the total value proposition is very competitive. “XFORM has brought several advantages to our customer,” says Nim. “It obtains fast cycle times, using even a three-position EOAT plate, and there is lots of room in the robot area to make changeovers fast and hassle-free.” The Uzbek company also benefits from regular consulting support from local SIPA representatives, who provide optimal business solutions for business helped by in-depth knowledge of market trends, and who can also react quickly to any issues arising in production.

FOCUS ON:
Packaging Integral Approach

02

TAKING A HOLISTIC APPROACH TO PACKAGING DESIGN AND DEVELOPMENT

SIPA has adopted a revolutionary approach to PET container design and development that goes well beyond what is normally expected of a processing equipment supplier. The company's capabilities in systems to produce preforms by injection molding and using the unique XTREME injection-compression molding technology are well-known; so too is its position in bottle stretch-blow molding, with both reheat systems and single-step injection-stretch-blow molding. SIPA has substantial capacity for making molds for preforms and for bottles to complement these molding systems.
But SIPA's recently enhanced ability to provide not just assistance, but also full responsibility, for preform and container design and development, is remarkable too.

> SIPA design and engineering experts understand all the key parameters that need to be considered from the seed of an idea all the way through to a successful product.

GLOBAL DESIGN EXPERTISE

The company has built up a network of design centers across the world, in Europe, the USA, and China. A global team of experts, including 15 fully qualified industrial designers, can produce designs that take into account what the container will contain, what specific markets it is aimed at, what the sales strategy of the customer is, and much more.
SIPA design and engineering experts understand all the key parameters that need to be considered from the seed of an idea all the way through to a successful product. They consider not only the look of a container, but also how the look fits with the identity of the packaged product, how the container feels and behaves, how easy it is to produce, how it performs on the filling line, in storage, and in transport; and last but not least, how much it all costs.

FOR LABELS TOO – AND SECONDARY PACKAGING

They can apply their expertise not only to the container, but also to the label and/or other forms of decoration, and even the secondary packaging. And because the design centers are located in crucial end-user markets, staffed with experts steeped in local knowledge, they are positioned to create and develop ideas that best meet the needs of the specific customer and the target users. Local knowledge includes not only understanding of how markets are today, but how they are likely to develop, as consumer tastes change, and as new rules and regulations are introduced. In Europe, for example, environmental legislation is calling for drinks bottles with tethered caps – caps that don't detach from the bottle when they are unscrewed, and so are less likely to disappear when the bottle has been emptied. New cap designs are likely to have important implications for bottle neck designs, and SIPA is already testing new versions.

MARKET EXPERTISE IS PART OF THE SERVICE PACKAGE

It goes well beyond design though. SIPA has the in-depth knowledge and global experience to provide assistance with market research and route-to-market strategies that will help the customer bring the spark of an idea into a commercial reality sitting on the shop shelf in the shortest time possible.
This means that SIPA can speak to its customers from all angles of the packaging circle – and it really is a circle, because SIPA has industry-leading experience and expertise in multiple aspects of recycling, from design for recycling, all the way through to processing post-consumer recycle into good-as-new containers.

DESIGN FOR RECYCLING…

SIPA strictly follows the Recyclass Design for Recycling guidelines established by EPBP, the European PET Bottle Platform. This voluntary industry initiative provides PET bottle design guidelines for recycling, evaluates PET bottle packaging solutions and technologies, and facilitates understanding of the effects of new PET bottle innovations on recycling processes. Several test procedures can be used to assess the impact on recycling of new packaging technologies.

… AND HOW BEST TO USE RECYCLATE

SIPA has considerable expertise in how to use post-consumer recycled PET, or rPET, in new containers for food and drink. This means not only creating designs that take into account differences and variations in processing characteristics of rPET, but also other less obvious factors such as the increased level of powder that rPET processing creates.

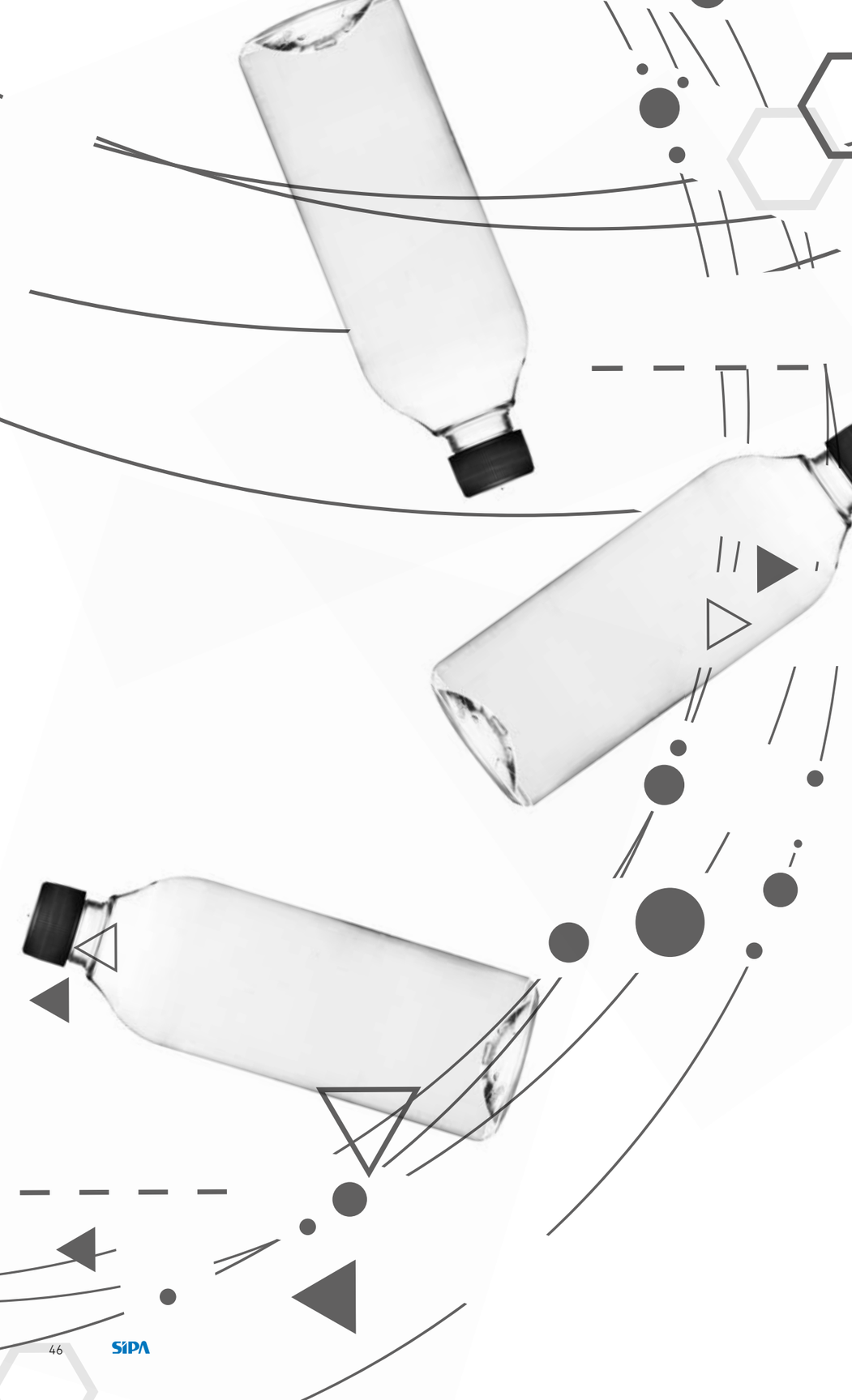
SIPA recently established the AWArPET brand to advance its environmentally conscious approach to the design and production of PET packaging. AWArPET bottles are very light: SIPA has for example been involved in a design project for a one-liter water bottle weighing just 16g, far lighter than most 1-L bottles currently on the market.

IT ALL STARTS WITH AN IDEA

Any design project starts with a blank piece of paper (or possibly a blank iPad screen). Working with even the most basic of briefs, SIPA experts can create a sophisticated design concept, beginning with some fine-tuning of the original customer idea, moving to renderings and technical drawings, finite element analysis to simulate performance of the container, through to solid mock-ups produced in the shortest of times using appropriate additive manufacturing (3D printing) techniques, on virtual and functional prototypes, and eventually to the market-ready product. The customer can share their ideas with the SIPA team in complete confidence, since it is all one-on-one, with no external agencies involved. The expression “one-stop shop” may be over-used sometimes, but in SIPA’s case, it truly is applicable. Everything can be resolved in a seamless, integrated progression towards market success.

SUCCESSFUL PROJECTS ALREADY COMPLETED

SIPA has already applied the new packaging design and development service concept to several projects, including one that involved converting a barbeque sauce bottle from glass to hot-fill PET, maintaining the ‘retro” look of the original; and another for a customer employing SIPA’s ground-breaking XTREME rotary injection-compression preform molding system, for which an in-depth study of the impact on performance of different levels of PCR was assessed.



TECHNICAL WINDOW:
latest developments.

03

HIGH PERFORMANCE FOR WIDE MOUTHS

The ECS SP 80 single-stage injection-stretch-blow molding machine from SIPA is an excellent choice for companies wanting to produce wide-mouthed PET jars with the best performance, economically.

MIX OF SERVO AND HYDRAULIC DRIVES

The machine features a hybrid drive system that uses the most appropriate technology for each set of movements. So melt injection, blow mold opening and closing, indexing and preform stretching are all carried out using servo drives, making a single hydraulic pump sufficient for other movements (three pumps are the norm on rival machines). An accumulator system provides smooth and fast hydraulic operations.

MORE IS MORE

An ISBM system, with so many movements, needs to be robust. There is a lot of talk about lightweighting in PET packaging – hence the expression “less is more” – but when it comes to equipment, heavy can be good. The ECS SP 80 hits the scales at 15 tonnes. The ECS SP 80 is large in other ways too: cavity pitch is greater than the norm, sufficient for example to produce two 10-liter bottles at a time. Shot weights are also high: up to 530g.

ENERGY USE IS LESS

Despite its size, the machine uses a minimal amount of energy : around 500W/kg, which is very low.

FINE-TUNED FEATURES

The ECS SP 80 can produce containers with neck finishes up to 130 mm in diameter. It has a dedicated injection design to optimize material distribution and reduce cycle time. The conditioning system design is also dedicated to provide a preform thermal profile based on the bottle specification measured in terms of overall performance and material distribution. And in the stretch-blow station, special designs for the blow seals reduce the high pressure air requirement during the blowing phase, cutting consumption of compressed air.

MANY MOLDS, ONE HOT RUNNER SYSTEM

SIPA has developed a special preform injection mold technology for its ECS SP machines that makes it possible to use the same hot runner system for all molds with the same number of cavities, whatever the container design. This has the obvious advantage that any future investment in new molds can be contained. Valve gating is standard for the hot runner nozzles, to ensure the fastest cycle times.

AN IDEAL MACHINE FOR R&D, SCALE-UP, AND START-UP

SFL 4/3 XL

SIPA's very broad range of stretch-blow molding machines caters for diverse customer needs in terms of output rates and container size; there is of course also the choice between linear and rotary machines. One especially versatile model is the linear SFL 4/3 XL, with its ability to hold one, two, or three cavities (format changes are quick and simple to carry out) and to produce containers as small as 12 mL and as large as 12L, at speeds of up to 5400 bottles per hour.
The SFL 4/3 XL is an excellent small-batch production unit, and it also works very well as an R&D tool, so it can be used as a bridge between container development and market introduction, avoiding all the problems that have the potential to arise in scale-up when switching from one machine to another: no need to change molds, use different preforms, or make adjustments to handling equipment.

In fact, for all these reasons, numerous customers have bought the SFL 4/3 XL to use in this way. SIPA has installed one in its prototyping department too.
The list of advantages of the SFL 4/3 XL is long. It can for example be equipped with a special mold holder that accepts cavities from rotary stretch-blow machines, including other brands. Possible applications range from simple bottles for still water through to complex hot-fill containers produced with the latest generation of electric heating technology molds. The SFL 4/3 XL can be equipped with various accessories too: for neck orientation, systems to fit handles after molding, preferential heating for oval containers… the list goes on.

The SFL 4/3 XL can be equipped with various accessories too: for neck orientation, systems to fit handles after molding, preferential heating for oval containers… the list goes on.

FROM FLAKE TO FILL WITH XTREME RENEW SINCRO CUBE

SIPA has on many occasions demonstrated its considerable skills in combining the separate elements found in bottle production and filling lines into fully integrated blocks. Now there is a new chapter in the story.
It all began with the ECS single-stage injection-stretch-blow molding (ISBM) system, which first came onto the market way back in 1986. Later, SIPA took another important step forward with Sincro Bloc R, a compact integrated rotary system for high speed rotary blowing/filling/capping. Recently, following the introduction of XTREME, the revolutionary rotary platform for manufacturing high-performance, ultra-low-weight preforms using injection-compression molding, SIPA unveiled the XTREME Sincro Cube system, possibly the ultimate in process integration, combining preform production, bottle blowing, and filling and capping.

HOT WASHED FLAKES

PREFORM

EMPTY BOTTLE

FILLED AND CAPPED BOTTLE

Integration evolution continues

Possibly? Well, it may have been at the time, but now we have XTREME Renew Sincro Cube. This has to be the ultimate (at least for today) in terms of systems integration for PET packaging in the world of the Circular Economy. Because what it does is take XTREME Sincro Cube, which works with virgin PET, and add in more revolutionary technology to enable it to operate extremely energy-efficiently with post-consumer PET flake – in a system that, once again, is totally integrated.

XTREME Renew is the best technology currently available anywhere in the world for converting PET bottle waste into 100% rPET preforms. SIPA has already sold the XTREME Renew system, which it developed with Austrian recycling technology leader EREMA, to global beverage and spirit groups such as Suntory in Japan and Coca-Cola in Poland, as well as to the Amparo family in Brazil working in the detergent industry.

High-level energy savings in post-consumer PET recycling

Energy consumption is close to 30% less than a conventional PET preform production system, and involves CO_2 emissions almost 80% lower; compared with traditional systems producing rPET containers, the emissions reduction is around 18%. In addition to this, XTREME Renew has a lower requirement on warehouse space that can amount to as much as 20%. XTREME Renews starts with EREMA's Vacurema technology, which decontaminates and removes moisture from the flakes under vacuum. It creates a highly homogenous melt, even if input material has variable viscosity – something that is highly likely with post-consumer material.

Straight from flake to preform…

The Vacurema extruder is connected directly with an XTREME preform production unit, eliminating steps found in other recycling systems for granulation and reprocessing, improving energy efficiency, cutting costs, and increasing product esthetics and performance. Colour of the processed material is better, and levels of acetaldehyde are very low.

… and through to filled bottles

It almost goes without saying that XTREME Renew can be fully integrated with SIPA rotary bottle blowing, filling, and further downstream systems, but we'll say it anyway. The XTREME Sincro Cube system is a paragon of process integration, combining ultra-lightweight preform production, extremely energy-efficient bottle blowing, and filling and capping. It can be configured for all kinds of products: still and carbonated, cold-fill and hot-fill, with and without pulp, sensitive products (including CSDs without preservatives) and value products such as edible oil, milk and derivates, premium clear juices, home, and personal care products. The solution is compact – everything fits into a space of about 200 square meters – and cost-saving. And it produces a better result.

XTREME creates preforms that are up to 10% lighter than even the lightest preform produced by conventional injection molding. In the Sincro Cube, XTREME feeds an XTRA rotary stretch-blower designed to achieve top performance levels with the highest energy saving at the highest speed in the market. Finally, there is Flextronic, an innovative modular range of electronic, volumetric filling monoblocs. By choosing the most suitable filling valve, it is possible to create bespoke solutions for a wide range of bottling needs.

Multiple configuration options

Just like the original XTREME Sincro Cube, the new system with added recycling capability is available in numerous versions. The preform production wheel can hold 72 or 96 cavities, the blowing unit holds 16, 20, or 24 molds, and the number of vales on the filling station ranges from 60 to 100. Depending on the combination, maximum output is between 36,000 and 54,000 filled bottles per hour. All combinations are capable of producing filled bottles up to 3L in volume.

SIPA PROVIDES THE PERSONAL TOUCH IN CUSTOMER SERVICE

LIFE CYCLE SERVICE

For any technology provider, provision of post-sales technical service is a must. But SIPA has always gone the extra mile in making sure the service meets individual customer needs, and that is something much appreciated in the market. Now, with SIPA technical service having been given a comprehensive upgrade in recent months, the concept of true partnership has been further extended.
With an innovative digital ecosystem, SIPA has transformed the traditional concept of B2B service into a true partnership in which the skills of both partners are shared, with new interactive multi-channel digital solutions just a click away. SIPA has a full range of services to support customers throughout the lifetime of their plant. SIPA Life Cycle Service is a highly innovative customizable package that is "always on."
SIPA believes that its customer-centric philosophy makes an important difference. Targeted and timely technical service can save converters significant amounts of money in ensuring that their plant is always operational, always in the best condition, consistently making products of the highest quality. This is the meaning of true partnership.

The speed at which markets, technologies, and the needs of the end user evolve means that the entire production chain must be able to adapt constantly. Behind SIPA's Life Cycle Service (LCS) is a mission to understand the individual needs of each partner and provide high added-value solutions that stay in tune with that evolution.
SIPA introduced the Life Cycle Service several years ago, but it continues to evolve. Most recently, the range of LCS services has been extended to satisfy customer requests even more fully and guarantee the right solution with the greatest possible flexibility every time, increasing the overall efficiency of manufacturing systems.
LCS solutions now comprise just about everything a converter needs in terms of service to ensure their plant keeps at the highest level of productivity, quality, functionality and reliability: Digital Services, Technical Support, Remote Global Assistance, Maintenance Management, Technology Upgrades, Auditing, Renovation and Relocation of Existing Plant, Line Conversions, Spare Parts, Hot Runner Refurbishment, Technical Training, and Service Contracts.

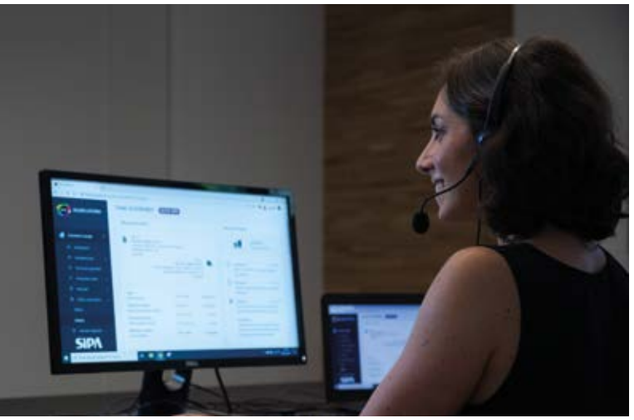
Today, SIPA partners can take advantage of a team that:

- provides total worldwide support and service with a high technological value;
- guarantees production continuity, increasing performance and efficiency
- ensures a constant response to technological evolution, with special attention to sustainability;
- optimises resources and productivity;
- conceives, develops, and propose new scalable and customizable solutions.

LCS solutions can be divided into 12 different facets:

1. DIGITAL SERVICES

One of SIPA's latest service innovations is the Echo System, a cloud-based platform created to connect people, businesses and resources in an interactive environment based on total skill sharing. Echo System makes it possible to have full control of system performance at all times, increasing efficiency and optimizing costs. It allows users to access information on any of its SIPA machines anywhere in the world, at any time. It is made up of several elements: XCON, Teleservice, Warehouse 4.0, XDATA, and XCHANGE.
XCON makes it possible to monitor machine performance and receive real time technical support.
TELESERVICE is the remote assistance solution that significantly reduces technical support response times and eliminates all the costs relating to transfers, by interacting directly with SIPA machines in the field. Teleservice comes with the XRAY Augmented Reality tool (more on this in a moment).
WAREHOUSE 4.0 is a high performance and customizable platform for efficient organization of all the processes involved in stock management, allowing the user to always know the state of stock and inventory, analyze the data and speed up workflows.
XDATA is an innovative solution that involves every operating phase and enhances the manufacturing performance of the machines. The XDATA supervisor provides essential information to speed up processes, improve quality with continual analysis and immediate reports, identify any operating problems and deal with them in real time.
XCHANGE is a universal communication interface that enables a processing machine to connect to enterprise-level data acquisition systems. It allows implementation of various protocols to satisfy any specific need.



2. TECHNICAL SUPPORT

SIPA now offers XRAY, an augmented reality service platform that facilitates remote interventions with the combination of smart glasses and smart phones, guaranteeing real time assistance to locations anywhere in the world, through an IoT-enabled combination of on-site and remote interventions. A technician standing by their equipment can be guided through routines by a SIPA engineer on the other side of the world. The right SIPA specialist is always assigned to the task, based on the problem to be solved. When machines are connected to the cloud, XRAY also provides direct software updates.

3. GLOBAL ASSISTANCE

SIPA operates a technical service network to provide solutions all over the world. Over 200 qualified technicians are connected to each other to guarantee fast, thorough problem solving wherever the customer is located.

4. MAINTENANCE

Proper operation of every machine is based not only on care and correct use, but also on a post-sales service entrusted to experienced hands. Scheduled and preventive maintenance of machines is essential to guarantee contractual performance levels, safety compliance, optimum operation, and reliability over time, but also to reduce the overall costs measured over the machine's lifetime. SIPA offers a full maintenance service, based on customized contracts, according to the model, age, and workload of the machines in question, to restore the system to "like new" conditions. Machine stoppage can be planned with the customer, optimizing the intervention period, and increasing operating availability of equipment.

5. TECHNOLOGICAL UPGRADES

To maintain a high level of reliability for bottling machines and lines over time, and above all to increase performance and the value of investments, the SIPA Life Cycle Service Team offers all customers the availability of technological upgrades to make their machines future-proof, efficient and productive, as well as providing support to develop containers that are always cutting edge. Technological Upgrades comprise technical improvements to existing machines or lines, the feasibility of which is assessed following an on-site visit by a team of experts. The results include improved plant performance and quality; a reduction in of energy consumption; reduction in the weight of containers; quicker format changes; and even improved safety conditions with new generation safeguards.

6. AUDITS

SIPA Life Cycle Service audits help customers identify losses in efficiency along the production line, and make the right improvements to keep performance high and optimize investment plans. SIPA technicians can provide the SIPA Life Cycle Service Team with a detailed picture of the state of the plant, so a targeted maintenance plan can be drawn up and a list of required spare parts set out. This is the key to maintenance that will restore the machine to its original conditions.

7. PLANT RELOCATION AND RETROFITTING

If a customer needs to upgrade or transfer a production unit or entire production line, the SIPA LCS Team is available to transfer the plant, from dismantling to repositioning, until it is made new. Activities include preliminary analysis and feasibility studies; detailed plan of intervention; dismantling, packing, and shipping of equipment and reassembly; retrofitting and maintenance of machines using original SIPA spare parts; start-up and final testing; and training.

8. LINE CONVERSION

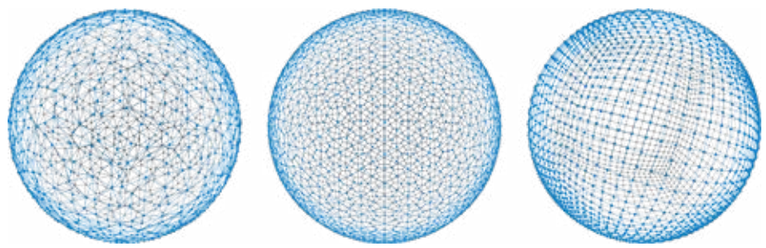
SIPA can assist customers to convert existing SIPA plant, to help insert them in production sectors where there is a higher demand than those in which they already operate, and to allow transformation of the production processes with new technology and new functions, in line with current safety regulations, adapting the machines quickly and safely.

9. ORIGINAL SPARE PARTS

The use of original spare parts guarantees the SIPA standard of quality and ensures that the performance and lifespan of the systems will remain unchanged in the medium and long term. SIPA has developed a logistics process and strategically located warehouses, fully integrated with each other to allow widespread distribution of spare parts. The supply chain has also been fully re-engineered to complete all orders in a timely manner. The spare parts catalogue is precise and easy to consult. It is available in the 3D manuals supplied as an integral part of the machine, and through the ECHO platform.

10. HOT RUNNER REFURBISHMENT

SIPA offers a series of preventive maintenance and regeneration plans for the hot runner components of injection molds, designed and guaranteed to reduce unplanned machine stoppage costs to a minimum. There are three service levels: preventive maintenance; intermediate regeneration (returning the HR to an optimum state, eliminating all air and PET leaks); and full refurbishment. SIPA experts have the know-how and ability to restore SIPA hot chambers of any generation. They can offer a flexible range of treatments and costs.



11. TECHNICAL TRAINING

Staff responsible for operation and maintenance of the machinery have to be adequately trained and constantly updated. SIPA offers different training levels and plans, including customized ones, to improve and develop the knowledge of operators, maintenance teams and all the professional figures involved in the manufacturing process and in product quality control.

12. SERVICE CONTRACTS

SIPA believes in the importance of preventive maintenance and a first-class post-sales service, to provide customers with the latest technology available on the market. It has designed specific flexible, modular maintenance plans, based on contracts that aim to improve the OEE (Overall Equipment Effectiveness) and extend the working life of assets. The overall aim is to reduce both unscheduled machine stoppage time and total maintenance costs. The contracts consist of a series of services: from regular, scheduled inspections to training of technical staff, and they are only stipulated after adequate analysis by specialist staff, who assess conditions, age, and use of the machine to construct a made-to-measure package of interventions.

PETWORK:
concept, design, engineering,
what's new in packaging world

04

BELLA: A CONCENTRATE OF LUXURIOUS DESIGN

The next time you come onto the SIPA stand at a show like Drinktec, or the next time you have a meeting in SIPA, there is a very good chance that you will be offered a drink of water. Nothing strange about that, but this water is different. It will come in a bottle just like the one in the picture here. It's a bottle that was conceived, designed, tested and produced in-house by SIPA, then taken to an independent SIPA customer where it was filled and capped on SIPA equipment, given a label designed by SIPA, and then palletized with SIPA machinery. SIPA calls the product Bella. Bella, beautiful in Italian, signifies a new and progressive way of understanding packaging design and development. The project that led to its realization provides the perfect demonstration of how SIPA can partner any customer, anywhere in the world, in all phases of a premium packaging project, from the original idea, to design of the bottle and the preform best suited to make it; a bottle that catches the eye of the consumer with its elegant shape and beautiful label. Even the closure was purpose-designed by SIPA. In other words, in everything that a PET bottle development project entails, SIPA is there to lead you to a successful conclusion.

FROM THE GLACIER TO THE BOTTLE

A few months ago, Hansa Borg Bryggerier, Norway's second largest brewery and beverage group, wanted to develop new premium PET bottles for its family of still, sparkling and flavored waters, called Olden. So it called up SIPA.
SIPA responded with new designs of bottles in three sizes – 500mL, 650mL, and 1250mL, and once the original proposals were accepted, it delivered mock-ups and finally the molds to fit on a rotary stretch-blow molding machine already own by Hansa Borg.

Olden is a natural mineral water coming from the 50 km_2 Myklebust glacier in Norway's famous Jostedalsbreen National Park. As the ice on the underside of the glacier melts (after staying in a frozen state for thousands of years), the water flows through Gneiss bedrock, where it picks up minerals, and then some of it flows through pipes directly into Hansa Borg's bottling plant in Oldedalen, in in Nordfjord. Strict quality requirements ensure that the water is untouched and untreated until it is bottled. Olden mineral water is perfectly clean, crystal clear and fresh. And the bottles are beautiful!

SIPA BRINGS A NEW SPARKLE TO THE WINE MARKET

Wine producers are at the mercy of many variables when it comes to trying to turn a profit. Consumer confidence and the weather are probably at the top of the list. Well, in Italy at least, first signs are that 2022 will be a good vintage, even as consumers' tightening wallets are having a negative effect. But there is a new hurdle to overcome this year: finding the bottles to put the wine in.

For reasons that are not completely clear, but which can mostly be filed under the heading "supply chain," but which include rocketing costs for energy and raw materials, glass bottles are harder to find and much more expensive than they used to be. A wine maker buying glass bottles today could easily have to pay 30% more than they did last year.

The wine sector accounts for something like 45% of the market for glass bottles, which until recently was on a rapid rise – currently over 5 million tonnes, compared with 4 million tonnes in 2016, valued at over 2.4 billion euros. Sparkling wine producers probably paid much more for their bottles last year than they did in 2020.

Right on cue, SIPA now presents the first PET bottle in the world for sparkling wine. The company's Packaging Development Team has developed a product that is perfect for replacing traditional glass bottles, capable of running on existing filling lines.
A key part of the SIPA innovation is the bottle neck, which looks just like the glass version, meaning that it accepts the classical mushroom-shaped cork with its metal cage. The base also looks the same as the original. The design provides a top-load resistance of 3500N.
The PET bottles have already been tested on glass lines, demonstrating perfect interchangeability with glass versions. Sparkling wine consumers will enjoy the same experience with the new containers as they always have, from uncorking to pouring. But they may notice that the PET versions are lighter at just 90g (glass bottle average weight for sparkling wine is 720/750g) and less likely to break – which is also great for changing supply logistics as sales via e-commerce and home delivery continue to rise. It is always useful to mention that this dramatic decreasing on bottle weight may surely have a positive impact on CO_2 emission due to a more efficient logistic.
So...CIN CIN, as we say in Italy!

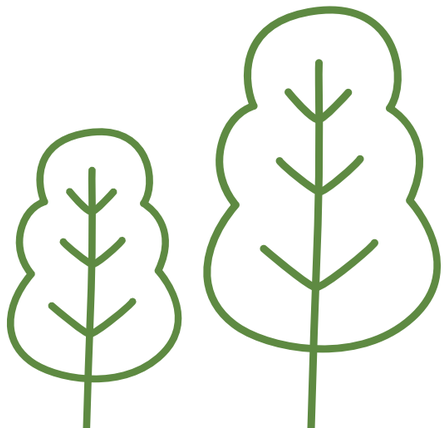
SUSTAINABILITY

Technologies and actions for recycling in a view of circular economy.

05

SUSTAINABLE SOLUTIONS FOR AND FROM SIPA

Earlier this year, SIPA published its third Sustainability Report, detailing the company's progress on its sustainability path and future prospects. SIPA's imperative is to supply sustainable packaging solutions, to develop systems that can reduce the consumption of both resin and energy, and adhere to the principles of the circular economy.



SIPA is committed to helping its customers produce high-performance, lightweight containers that are as easy to recycle as possible, using the most energy-efficient technologies possible, working with up to 100% recycled PET.
On the energy front, SIPA is developing a trajectory to 2025-2035 to make it progressively independent from fossil fuels for all its energy needs. And that is not all. The Group has already launched projects with partners and suppliers to share and apply the same principles of sustainability, so as to act decisively on indirect non-energy emissions (what is known as Scope 3 under the Greenhouse Gas Protocol).
Investments in energy efficiency and the purchase of electricity with guaranteed origin from renewable sources for its plant in Vittorio Veneto, Italy, have already led to substantial reductions in CO_2-equivalent emissions.

IMPROVING SUSTAINABILITY RATINGS

SIPA is currently participating in the EcoVadis sustainability ratings project. Actions necessary to improve its rating during 2022 are ongoing.
Total CO_2-equivalent emissions from SIPA decreased significantly (-74%) in 2021, compared to 2020, thanks to the acquisition of electricity certified as produced 100% from renewable sources. SIPA emissions depend to a large extent on its electricity consumption (Scope 2). This is why the company has chosen to invest significantly in energy efficiency projects and in the purchase of energy with certificate of origin.
Introduction of energy efficiency measures produced an 11% decrease in CO_2-equivalent emissions expressed as the ratio of tonnes of CO_2-equivalent related to electricity consumption/million revenue.
In SIPA production plants and warehouses, replacement of traditional lighting with LED lighting has created energy savings of 53%.
Paper consumption fell 36%, due to document digitalization.

CLOSING THE LOOP

SIPA has always been at the forefront in the development of sustainable solutions for the production of plastic packaging with the continuous introduction of innovations aimed at minimizing the environmental impact of its machines and packaging products.
The company has a special commitment to the design and manufacture machines for the production of containers that use 100% recycled PET, starting from PET granules with traditional technologies or bottle flakes washed in one production plant; this is the XTREME Renew concept, which uses fewer raw materials (-10%), saves energy (-30%), and reduces CO_2 emissions (-79%) compared to the production of containers with virgin material.

A HOLISTIC APPROACH TO SUSTAINABLE PET PACKAGING

SIPA's approach to designing PET containers is holistic: factors such as the low weight of the PET container, high performance, attractive and user-friendly aesthetics are considered, and these factors are adapted to the principles of circular economy. SIPA designers are involved in the development of more than 3000 new containers every year. The three Rs - Reduce, Reuse, Recycle - are constant principles in all these projects. Last year, SIPA set up the AWArPET brand, which represents an environmentally friendly approach to the design and production of PET packaging.
The company strictly follows the guidelines of Recyclass, Design for Recycling, established by the EPBP, the European PET bottle platform. This voluntary initiative provides guidelines for designing PET bottles optimized for recycling, evaluates packaging solutions and technologies, and helps understand the effects on recycling processes.
SIPA uses the Green Plastic Factor, or GPF, to show how light a bottle is compared to what it contains. GPF is the ratio between the volume of the container's content, in milliliters, and the weight of the empty container in grams. For a collapsible 10-liter bottle, the GPF is about 125, while for a 500 ml single-use bottle it is about 55. This clearly shows the high level of sustainability of large-format bottles, for which SIPA has developed specific machinery.

-74%
Tons of CO_2 eq emissions due to green energy acquisition

-11%
Tons of CO_2 eq emissions due to energy efficiency plans in production

53%
Energy savings with led lightning replacement in production plants and warehouses

-36%
Paper consumption due to digitalisation

DESIGN FOR RECYCLING AND FOR PERFORMANCE

For SIPA, the design for container recycling includes everything: from the quantity of raw material required (which must be reduced as much as possible while maintaining the container's performance) to the type of label, cap, any additives to be added in order to increase product shelf-life, the dimensions of the container itself. Not only primary packaging but secondary packaging too must be designed to be easily recyclable. Sustainable packaging must also keep contents in the best condition possible, for the longest time possible – and be designed to optimize storage and transport.

REDUCTION OF CONSUMPTION

SIPA pays maximum attention to producing items easily and efficiently using recycled materials, with solutions that promote safety, process consistency and longer life of the production plant. We are constantly committed to reducing the impact in every step of the production cycle, from weight reduction to saving energy and raw material. A key point is the reduction of machine consumption. Several solutions have been developed to reduce the consumption of energy during production of preforms, as well as in the phase of heating the preforms in ovens prior to blowing bottles. Solutions for reducing consumption or reusing compressed air have been developed.

ENVIRONMENTAL MANAGEMENT CERTIFICATION

In 2021, SIPA decided to undertake a certification of its environmental management system in accordance with the ISO 14001:2015 standard. The preparation phase of the reference documents and procedures was completed during the year. SIPA gained the ISO 14001:2015 certificate in June 2022.

MONITORING CONSUMPTION

SIPA last year implemented a system to monitor the consumption of electricity and is currently dividing energy-related activities in accordance with ISO 50001, a process that will take place without the objective of achieving certification. In terms of energy aspects, SIPA focused on the following objectives: introduction of the new role of Energy Manager; controls on the compressed air distribution system in order to minimize losses; application of specific controls on the efficiency of boilers; LED lights in production units and timer-equipped lights; purchase of 100% certified green energy from January 2021; and investigation of solutions or proposals for self-generation of energy.

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