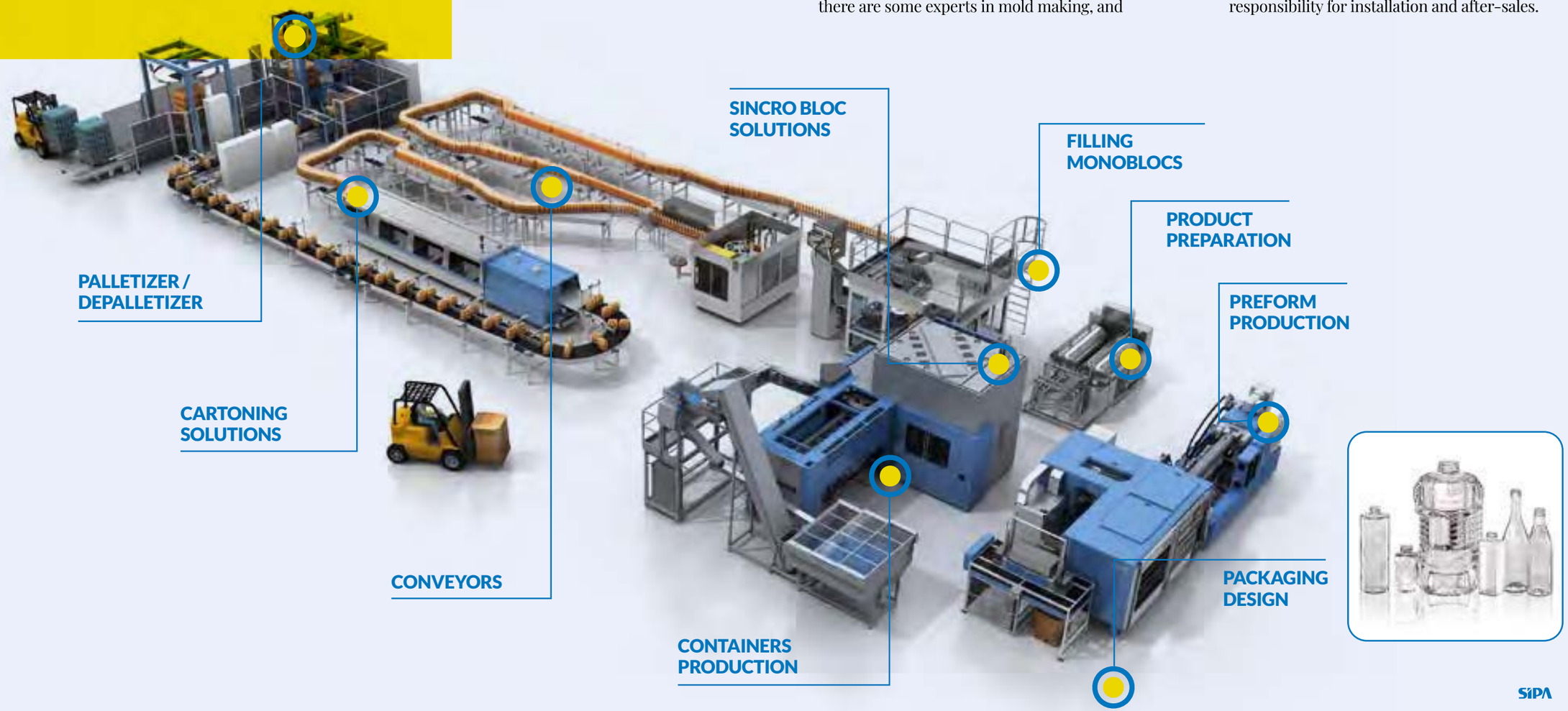
WELCOME TO THE WORLD'S ONLY PET CONTAINER TECHNOLOGY SUPERSTORE

You've got people coming round for dinner, and you want to impress. So you plan to go out shopping for the best ingredients. There's one shop that's really good for starters, and across town you know a great place for fish. Then you could go to the farmers market for fresh vegetables, but it's something of a hike to get there. You may have to go to the next town if you want to get the best for dessert. And that wine shop with its own sommelier, where is that?

Wouldn't it be great if all these experts were under one roof? They might even be able to give you some tips on which dishes go well together. Just think of all the time and energy you could save, and you'd most likely end up with the best meal ever!
It's rather like that with PET packaging. One outfit is good for preform machines, another for bottle blowers, and a third for fillers. Then there are some experts in mold making, and others in hot runners. You'll probably have to go somewhere else for finished product handling through. Plus, if you want help in bottle design and engineering, where do you go for that? And then if everything in the end does not quite work together as you want, who is going to take responsibility?

> "Or you could call SIPA."

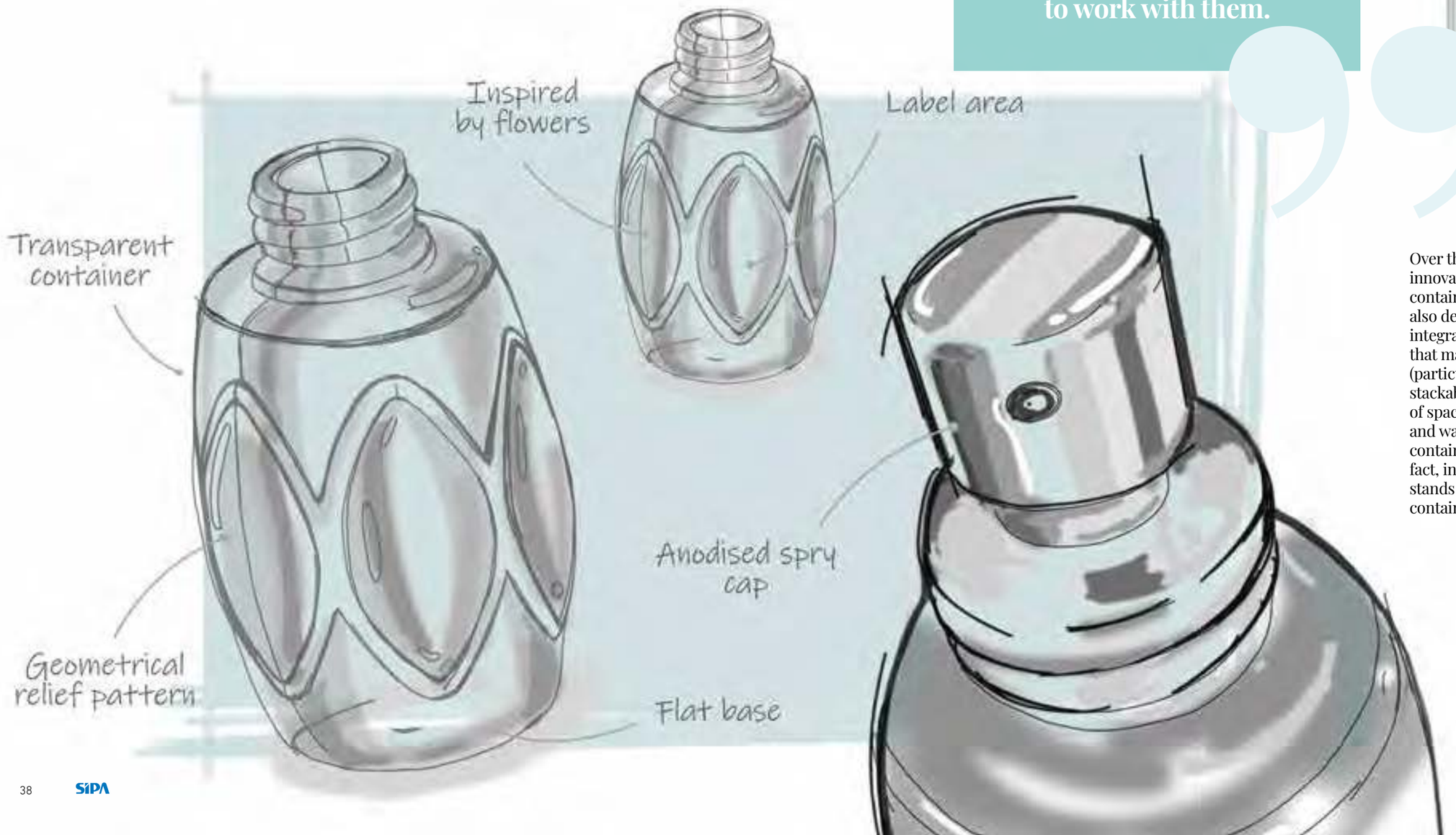
SIPA is unique – and we really mean unique – in acting as a one-stop-shop for everything from input in PET bottle concepts, through to pallets stacked with filled and labelled bottles ready for shipment to the store. SIPA can offer consultancy on all aspects of production along the line, and it will of course take full responsibility for installation and after-sales.



PACKAGING DEVELOPMENT

SIPA has an arsenal of tools that can help customers create containers that will gain consumers' attention, and which can be produced economically and sustainably. Design and development experts understand the key parameters that need to be considered when taking 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 how much it costs.

SIPA can create preform designs, for whatever size of container, incorporating special features in the neck and body, and then make sure that the blowing and filling equipment is best configured to work with them.



Over the years, SIPA has developed numerous innovative design solutions for all sorts of containers, not only standard types, but also designs incorporating handles, or with integrated grips, with off-center necks that make it easier to pour the product (particularly useful for cooking oil), and stackable containers that make the best use of space on the pallet to improve transport and warehousing logistics. Lightweight oil containers are a specialty of the company. In fact, in this particular market segment, SIPA stands out as having developed the lightest containers available, anywhere.

PREFORM MOLDS

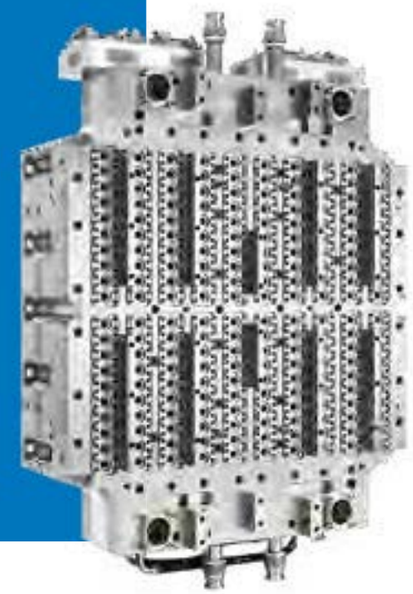
Productivity goes up, costs come down and carbon footprint gets smaller, when you cut cycle time in preform production. As a developer and manufacturer of more PET preform molds than almost anybody else around the world, SIPA not only understands these sums, but knows how to put them into practice. The benefits are available for preform producers everywhere, since SIPA preform molds can be interfaced with the vast majority of injection molding machines that are used in this application. A flexible approach to preform design and development has been fundamental in arriving at this leading position.

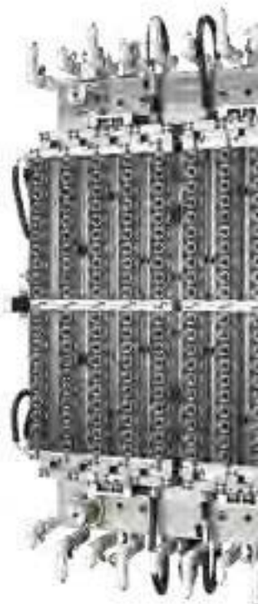
What results is a robust mold design that is suitable for whatever machines the customer has on their production floor.

This concept of flexibility and customization is built into the complete mold development process, virtually from the moment the idea of the product is born, throughout the development of the application with the customer.

Dimensioning of every individual system is strongly supported by finite element analysis to evaluate the thermal and fluid dynamics of that system.

To provide maximum flexibility, SIPA engineers consider multiple variables, including the layout of the mold.





APPLICATIONS IN MIND

SIPA stands alone in the PET preform production arena with the breadth of technologies it offers to its many and varied customers. The company has developed several families of machines, each with its own distinctive technology and set of operating characteristics, for different sectors of the global packaging industry.

THE FULL SIPA LINE-UP FOR PRODUCTION OF PET PREFORMS NOW COMPRISES XFORM AND XTREME.

The XFORM platform for highly cost-efficient production of PET preforms by conventional injection molding includes models to accommodate diverse production requirements. The XFORM 500 is SIPA's largest injection molding system, based on a 500-tonne machine with a double-toggle clamp. It stands out with its high energy efficiency, low maintenance costs and its ability to accept molds built by any manufacturer. It is for molds with many cavities (up to the astonish number of 200 cavities), molds with a weight that demands a clamp system capable of handling heavy loads, and for long periods.

XFORM 250 and 350 are for smaller molds, with lower cavitation. The former accepts molds with between 8 and 96 cavities, while the larger unit takes molds with as few as 16 and as many as 128 cavities.

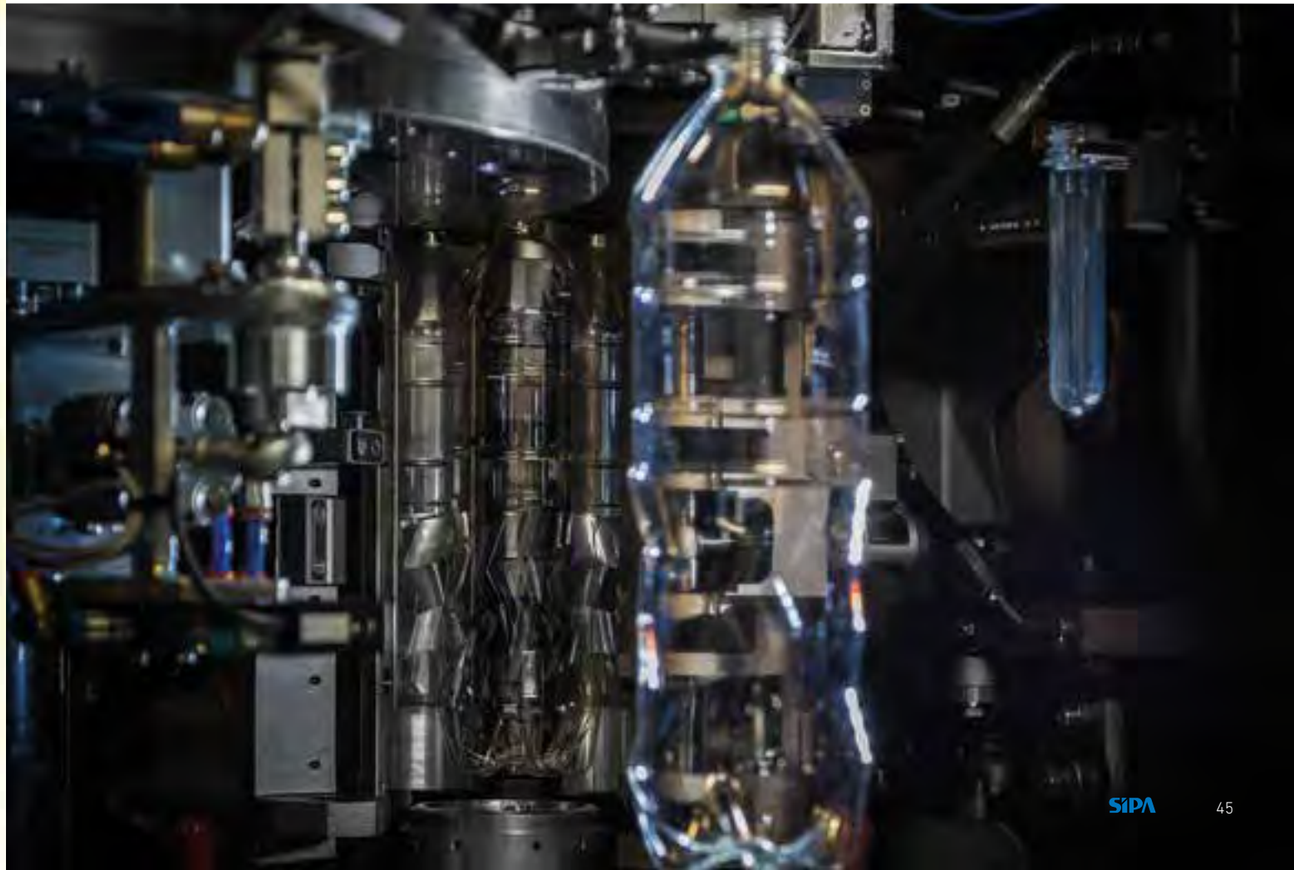
Meanwhile, XTREME is SIPA's revolutionary extrusion-injection-compression molding system intended specifically for processors wanting to produce preforms for extremely lightweight bottles. It is the best—and cleanest—solution on the market for high-speed production of lightweight preforms destined for bottles for water and aseptic filling

SOME PET BOTTLE PRODUCERS PREFER LINEAR STRETCH-BLOW MOLDING (SBM) MACHINES, OTHERS PREFER ROTARIES. EITHER WAY, SIPA HAS THE SOLUTION.

BOTTLE PRODUCTION

SIPA's revolutionary range of rotary SBM equipment, XTRA, comes in numerous sizes holding up to 24 cavities, suitable for production of cold- and hot-fill bottles, in virgin or recycled PET. All XTRA models stand out for their ability to produce high-quality containers, very quickly. A figure of 2800 bottles per cavity per hour for production of 1.5-liter carbonated soft drinks bottles is Best in Class. Machines feature an extra-wide active angle (200 deg.), reduced energy consumption, high flexibility and ease of use, as well as compatibility with other machines upstream and downstream.

XTRA was designed to be able to integrate and interact with other machines, creating high-performance production systems consisting of different products that all speak the same language. It can for example be directly connected to a filler to create a standard system for production and filling of PET containers; equally, it can be integrated with the XTREME platform for preform production, including XTREME Renew, which produces preforms directly from recycled bottles, creating a system unique in the world – XTREME Renew Sincro.



RECENT UPDATES ON STRETCH-BLOW-MOLDING SYSTEMS, SFL AND XTRA

Recently, SIPA expanded and diversified its range of SFL premium linear blow molding machines. The family has been increased with the addition of SFL Flex units with one or two cavities, for small batches production, while existing units have been rebranded: SFL Dynamic is for large bottles and for oval and custom shapes; SFL Performance units have the most cavities and the highest output (up to 16,000 bph); for larger containers, SIPA offers the SFL Big and the SFL Maxi; there are also versions devoted to wide-mouth containers, called SFL WM.

SIPA recommends its XTRA rotary equipment for high speed production (up to 65,000 b/h) and for lightweight products. The XTRA PH (Preferential Heating) model can produce oval bottles at high rate while XTRA BIG is fitted for the production of large containers up to 10 liters bringing the production rate up to 9000 b/h. But whatever type of SBM machine a customer chooses, SIPA can also produce (and design of course) the molds that go with it.

SINGLE-STAGE BOTTLE PRODUCTION

SIPA has not put all its eggs in one basket when it comes to bottle production. For a long time – longer in fact than it has been producing separate systems for preforms and bottles – it has offered single-stage injection-stretch-blow molding (ISBM) systems, under the ECS brand. There are two families: the original ECS FX line, and ECS SP machines that are better suited to lower outputs and smaller bottles, especially miniatures. So once again, all the bases are covered.

FILLING THE CONTAINER

SIPA produces various types of fillers. These include the Stillfill Evo mechanical gravity filler for hot- and cold-filled non-carbonated drinks; the mechanical Isofill isobaric level filler for carbonated soft drinks and mineral waters; the Flextronic S and SE electronic volumetric fillers for various types of still liquids and hot-fill products respectively; and the Flextronic W electronic weight filler for products with extra added value.

The Flextronic C electronic multi-product volumetric filling monobloc is suitable for filling CSDs, still and sparkling mineral waters, cold- and hot-fill juices.

SIPA offers linear and rotary options for highly integrated units blowing and filling with PET bottles – the SincroBloc family. In the beginning, all SincroBloc models were based on rotary stretch-blow moulding equipment.

But SIPA found that some customers, especially those bottling water and edible oil, needed a system, clean and compact like the originals, for larger formats up to 12 litres. For this, only linear stretch-blowers will do. Some customers also want to produce only limited quantities, possibly at only 2000 bottles per hour, and for this a linear machine is again more appropriate. So now, outputs from SincroBlocs cater for all tastes.

A SINGLE SYSTEM FOR BLOWING AND FILLING BOTTLES FOR CSDS AND HOT-FILL PRODUCTS

Around the world, many PET bottling companies are handling both carbonated soft drinks and hot-fill drinks such as fruit juices, isotonic sports drinks and teas. To do this, they generally choose lines that are configured for one type of product or the other.

But they don't have to. SIPA has for some time been offering filling lines that can handle both types of product, with change-over times of just a very few hours. With SIPA's rotary stretch-blow molding machines and Flextronic C, the concept has even more added-value than ever. The ability to blow and fill diverse types of container on a single line has been made without compromising any performance characteristics of the line.

In the product preparation area, SIPA has extended its offering with a series of machines that, together, provide an increased high level of flexibility and customization. The deaeration, carbonation, blending and

pasteurization stages can all be configured exactly to the specific needs of the customer and their products, whether they are CSDs or HF types.

SECONDARY PACKAGING

To complete the offer SIPA provides the complete range of palletizers and depalletizers, both traditional and robotized, for bottles, jars, cans, cartons, crates and shrink-packs as well as a comprehensive range of solutions for different container handling in plastic crates, American-type cartons and wraparound, designed to meet different levels of speed and to cover all production needs, from the simplest to the most complex packaging configurations handled with robotic solutions.

The secondary packaging range offers performance and efficiency to satisfy the most demanding needs of the beverage, food, wine & spirits, detergents, chemical and pharmaceutical industries.

TOTAL PLANT ENGINEERING

SIPA has strength in depth in plant engineering. Customers can consult with its experts to obtain optimum solutions that save them money and space while delivering the quality they need to be strong in the market. Customers get the optimal solution for their particular application, thanks to SIPA's cooperation with partners who are leaders in their own specific fields.