

Success stories

POSTOBÓN

Hattrick in Colombia

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Newly formed teams quickly discover that there are plenty of synergies to be explored. This also holds true for the partnership between South American beverage multi Postobón and KHS – which in a very short time indeed has yielded not one but three filling lines featuring various block systems.

NON-RETURNABLE PET

PHOTOGRAPHY / ILLUSTRATION

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COVER PHOTO

The Gatorade bottle recently developed by the KHS experts has panels, a flat base and vertical grooves that give it perfect stability.

With over 50 million inhabitants Colombia is the second-largest state in South America after Brazil and one of the most substantial growth markets on the continent. The country is characterized by the mountain peaks of the Andes that reach heights of almost 6,000 meters above sea level and its around 3,000 kilometers of coastline more or less equally distributed between the Pacific and Atlantic oceans. Colombia's best-selling beverage producer is Postobón, a big player that exports its products to 27 different countries worldwide. Its vast and highly diverse portfolio not only includes water and soft drinks but primarily juice, teas, energy drinks, beer and coffee. In its role as contract filler the company also bottles Pepsi, Gatorade, Mountain Dew and Seven Up, for example, plus Lipton Tea and Heineken beers. Of its 71 facilities, 20 are production sites that accommodate more than 100 filling lines, 20 of which are used for PET bottles. The company's two largest complexes are located in the capital Bogotá, a metropolis of ten million, and in Malambo, a suburb of Barranquilla in the north of the country, where a greenfield project designed to house a total of eleven lines was begun in 2018.

Three block systems from KHS

Whereas in the past Postobón's long-term relations with KHS - focused on the supply of stretch blow molders, in 2018 the Colombian bottler opted for its first block system from the Dortmund systems provider. The first procured line includes an InnoPET TriBlock for water in plastic containers that comprises a stretch blow molder, labeler and filler. At a maximum capacity of 54,000 bottles per hour, the line is technically convincing with its consistent neck handling from the preform to the bottled product. With the help of the experts from KHS' Bottles & Shapes program, a 600-milliliter bottle was specifically developed for this application that saves on material and weighs no more than ten grams. One particularly remarkable attribute in the dry section of the line is the multifuel burner on the Innopack Kisters SP that enables the shrink tunnel to be flexibly heated by either natural or propane gas.

Postobón was so pleased with the quality and speed of the installation and the work performed by the team on site that it subsequently ordered not one but two more block systems within the space of just 18 months. The second KHS line went into operation in Bogotá in 2021. This is also a turnkey filling line where a BloFill duo block for the hot filling (HotFill+) of juice, tea and energy drinks with optional nitrogen dosing forms the heart of the line. Finally, the third KHS line was installed at the aforementioned site in 2023 – with a TriBlock for carbonated beverages such as Pepsi Cola. “We value KHS as one of the world’s most renowned manufacturers of plant engineering,” says César Bohórquez, who as national project manager for Postobón coordinates the implementation of all strategic growth projects. “We’re impressed by their pioneering technological standards for high-speed lines. We count on KHS with respect to the growth of our business as one of our key technology partners. They develop extensive and efficient systems for our processes that perfectly meet Postobón’s growth requirements.”



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In the InnoPET BloFill KHS combines cutting-edge stretch blow molding technology with energy-efficient, flexible filling machinery.

Hot fill highlight

Technically speaking, the new HotFill+ line especially is a real highlight – for a number of reasons. At a rate of 2,250 0.5-liter bottles per hour and station it achieves an overall capacity of up to 54,000 containers per hour and is thus the fastest KHS line of its type to date worldwide. This is largely down to the reduced weight of the container design optimized by KHS' Bottles & Shapes experts and extremely stable process control throughout the entire block. Thirteen products from three different categories are filled in eight formats holding between 200 milliliters and 1.5 liters on the highly flexible line. A filling valve specially developed for the customer can fill all beverages without the need for any format changeovers – regardless of whether these contain pulp or fruit fibers.

At a glance

THREE BLOCKS FOR POSTOBÓN

InnoPET TriBlock

When? 2019

Where? Malambo

How much? Up to 54,000 bottles per hour

For what? Water

InnoPET BloFill with a HotFill+ system

When? 2021

Where? Bogotá

How much? Up to 54,000 bottles per hour

For what? Juice, tea, energy drinks

InnoPET TriBlock

When? 2023

Where? Bogotá

How much? Up to 54,000 bottles per hour

For what? Carbonated soft drinks

Want to combine a stretch blow molder, labeler and filler/capper combination in a single system? Then why not explore the benefits of our InnoPET TriBlock on khs.com?

[READ MORE](#)

Sustainable and climate-friendly

It was important to the Colombians that the beverage containers use as little plastic as possible – and not just for financial reasons: besides quality and efficiency, sustainability and protection of the climate are further major issues the bottler invests considerable sums of money in. In 2021 alone, approximately US\$30 million was spent on various social and environmental programs. Postobón's biggest water brand Aqua Cristal, for example, is filled into bottles made entirely of recycled PET that themselves are fully recyclable. All told, the legal requirements for the avoidance of waste are more than met: for instance, the Colombians are proud of the fact that 72% of the packaging materials circulated by the company are recovered and reused. This figure even runs to 95% for glass bottles.

Any reduction in the amount of material used for the company's PET bottles must not be allowed to have a detrimental impact on their stability, however. On the small-format bottles for juice and tea, whose weight has been cut from 22 to 20 grams, this is mainly prevented by nitrogen being injected into the head space, thus increasing the interior pressure in the container until it's first opened. The six feet on the bottle base provide added rigidity and sturdiness.



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Up to 54,000 bottles per hour are filled on each of the three new PET lines.



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On the highly flexible HotFill+ line thirteen products from three different categories are produced in eight formats holding between 200 milliliters and 1.5 liters.

See in our short video

how Postobón in Malambo is profiting from the KHS InnoPET TriBlock.

➤ [CLICK HERE FOR THE VIDEO](#)

Cutting-edge stretch blow molding technology

Further resources are saved with the help of KHS' latest-generation stretch blow molding technology. The focus heater on the near infrared or NIR heating system allows optimum use of the material directly below the preform neck ring for the bottle walls and is largely instrumental in helping to cut down on weight. While the stretch blow molds are heated to a high of 120°C, the neck ring and base are water-cooled down to 10 to 15°C. This adapts the properties of the container in such a way that filling at a beverage temperature of up to 85°C takes place with just a minimum of shrinkage.

The specific location of the production site meant that the bottles used for hot filling merited special attention and were subjected to an extensive validation process. Postobón's products are filled in Colombia's capital at an elevation of 2,600 meters and thus need to withstand particularly high internal pressures. This is because bottles from Bogotá are also supplied to the Colombian coast down at sea level; once unloaded, there still needs to be enough positive pressure in the containers to prevent them from deforming. "In Bogotá, for example, the boiling point of water drops to 92°C because of the extreme elevation," explains Fernando Delgado, regional sales manager at KHS Andes. The bottle design thus needs to account for these physical challenges.



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A good rapport: César Bohórquez (left), national project manager at Postobón, and Fernando Delgado, regional sales manager for KHS Andes.



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Postobón's wide range of products not only includes juice, soda pop and energy drinks but also other carbonated soft drinks, water, beer, tea and coffee.

In addition to containers for hot filling with nitrogen, the experts at KHS also developed a classic hot-fill bottle with panels. The new Gatorade bottle for licensor PepsiCo has a flat base and vertical grooves that give it perfect stability without nitrogen having to be used during filling. Its weight has also been decreased from 26 to 24 grams.

“All of the KPIs we defined regarding cost, quality, efficiency and productivity have been kept to,” says Bohórquez happily and goes on to emphasize just how important the new system is. “With the new HotFill+ line from KHS we can boost our production of juice, tea and energy drinks by up to 54%. This gives us an increase in our total output of around 5%,” he smiles.



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The filled bottles are conveyed to the KHS Innopack Kisters SP packer where they are grouped and wrapped in shrink film.

Solutions to meet all challenges

The third KHS line covers a further segment, processing not just water but also carbonated soft drinks. The line is built around an InnoPET TriBlock featuring a KHS roll-fed station for hot-melt wrap-around labeling, also for a maximum of 54,000 bottles an

hour. Formats range from 300, 400 and 600 millimeters through 1.0 and 1.5 liters to the 2.5-liter container that's very popular in Colombia.

"Each of our projects presents us with unique challenges," Bohórquez sums up, looking back on the three new lines commissioned very quickly one after another. "In order to meet these, together with KHS we repeatedly look for and find solutions and synergies that take us a good step further towards reaching our ambitious strategic growth targets."

The most recent project to come out of the two companies' technological partnership is a new KHS InnoPET Blomax V stretch blow molder. Integrated into an existing PET line by Postobón's own converter Iberplast at the Caloto bottling plant, with its 20 cavities it can produce up to 45,000 bottles per hour in sizes ranging from 500 milliliters to one liter. On the line the containers are filled with beverages such as juice, tea and energy drinks at temperatures of up to 85°C.

Fact check

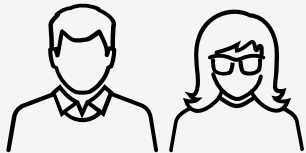
POSTOBÓN



450 SKUs holding between 200 milliliters and 3.125 liters – glass, PET, cans and Tetrapaks.

41,3 % market share

(total beverages by value in 2021).



11,131 employees
at 71 sites.

How much?

€945 million in sales (2022)

What?

35 brands in the segments water, carbonated soft drinks, energy drinks, tea, juice, coffee and beer.

Innovation and expertise

“Postobón always wants to keep its equipment state of the art – especially with respect to using as little energy and as few energy resources as possible in order to reduce the impact on the environment,” says Delgado. In KHS the customer benefits from continuous innovation and in-depth expertise regarding hot filling, for example. This is a success factor that provides a solid basis for a genuine relationship of trust, he believes. “On the one hand, our recipe for success entails nurturing close relations by correctly anticipating the issues and questions a customer may have. On the other, we form a perfectly coordinated team made up of KHS colleagues situated both locally and at our headquarters in Germany. This is something a customer like Postobón is of course happy to profit from.”

Any further questions?

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