



SMI SOLUTIONS FOR SANTA VITTORIA

IN THE HEART OF THE LIGURIAN ALPS, FLOWS THE PURE WATER BOTTLED BY THE SANTA VITTORIA SRL COMPANY, WHICH INVOLVED SMI AND ENOBERG FOR THE SUPPLY OF A NEW COMPLETE 25,000 BPH LINE.

From 2000 when Santa Vittoria was acquired by the Ballestra family of Bordighera (Imperia), the company has become an excellence of Liguria and the West.

This is also due to the continual investments within the production departments, such as the recent project

involving SMI and ENOBERG for the supply of a new complete 25,000 bph (0.5 L) line for bottling and packaging three different bottle formats PET (500 ml, 1500 ml and 2000 ml) of still and sparkling water, in cylindrical and square bottles. In this plant, advanced technology blends with the company's

tradition in all phases of the industrial process, from bottling to palletising, which are managed by automated systems to ensure products that are as safe and pure, as the environment that created them. The new investment was designed right down to the smallest detail, creating strong teamwork between Santa Vittoria and the designers at SMI and ENOBERG. The production process has been designed to keep every aspect of the bottling, packaging and handling of products within the line under constant control.

The new plant includes an integrated ECOBLOC® ERGON system, consisting of a SMI EBS 10 KL ERGON stretch-blow moulder and an electronic volumetric filling system ENOBERG 80-15 HEVS for natural and sparkling water.

KEY FEATURES OF THE EBS 10 KL ERGON STRETCH-BLOW MOULDING MODULE:

- Compact design, which ensures high speeds despite the limited space. The preform heating section is integrated with the stretch-blow moulding section.
- Quick and easy format changes: the preform feeding system is equipped with adjustments by means of numerical position counters, which speed up format change operations.
- Energy saving: stretch-blow moulding carousel equipped with motorised stretching rods controlled by electronic drives, which guarantee precision in operations and energy savings (no compressed air is required and power consumption is lower than solutions with linear motors).
- High-efficiency preform heating: system of heat-reflective panels in energy efficient ceramic composite material, positioned both in front and behind the lamps to ensure uniform heat distribution.
- Reduced mechanical intervention: the servo motor automatically adjusts according to the production speed.
- Efficient stretch-blow moulding system: high-performance valves and low dead volumes (~50%) which ensures reduced pre-blow moulding and blowing times and better quality of the bottles produced.
- Advanced automation.
- Simple and intuitive Posyc® operator interface.
- Predictive maintenance: machine equipped with a state-of-the-art meter to detect electricity consumption, compare it, monitor it, etc.

PET Containers that Enhance Purity and Lightness

The engineering project for the new Santa Vittoria line also involved the study of the PET containers produced by the SMI stretch-blow moulder and filled by the ENOBERG filler. The customer asked the SMI designers to revise the existing cylindrical bottle both aesthetically and functionally, especially for the handle section. The format on which SMI staff focused for the development of the new

design is the 1.5 L bottle, from which the smaller 0.5 L bottle is derived.

The peculiarity that has always distinguished the containers used by Santa Vittoria is the beautiful diamond decoration. Starting from this element, the motif was revised both in shape and size, until an aesthetic result was achieved that enhances the purity and lightness of the water contained in them. The evolution of the study was marked by the close collaboration between

SMI and Santa Vittoria, to the point of creating a customised version of the project with a suitable decoration and an adequate distribution of the same on the container. In addition, the development also led to the decoration becoming lighter and giving an end result of a very elegant, functional bottle, easily recognisable on the market.

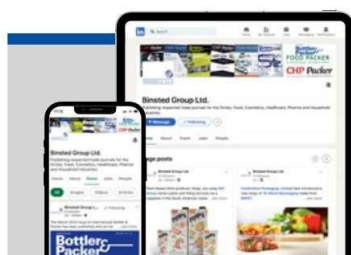
The performance of the container was also carefully analysed and improved, especially in the part of the handle, to respond to the Ligurian company's request to be able to use a lighter rPET preform. The weight reduction was also achieved through the choice of the 26/22 Gravity II neck, which provides a lighter thread suitable for bottling carbonated products.

Starting from all these aesthetic and functional assumptions, the SMI team began to develop the new concept, maintaining the style of the existing bottle, but making changes to the position and shape of the handle and the bottom, optimising the shape and proportions of the latter, in order to be able to use lighter preforms for the blowing of bottles without altering the resistance.

Secondary Packaging Solution

Acqua Santa Vittoria chose an extremely compact solution, which meets the logistical needs of the plant and adapts perfectly to the available space. It is a packaging system for the packaging of both cylindrical and square bottles that includes a DAT 10/10 accumulation table, a DV 500 ERGON divider, conveyor belts and an SK 502 F ERGON twin-lane shrink wrapper. The divider, belts and shrink wrapper work in sync, as if they were a single block, ensuring a very

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smooth packaging process. In addition, the adjustments of the belt guides are automatic, while the management of format changes is done directly from the machine panel, greatly simplifying the operation and maintenance of the entire line. The process ends with the tertiary packaging made in 800x1200 and 600x800 mm pallets by an automatic palletising system of the APS 3090 P ERGON series.

Linear Discharge Accumulation Table DAT 10/10

- Suitable for shaped containers (rectangular, square or oval); in the system supplied to the customer, all bottles, both round and square, processed by Santa Vittoria pass through the DAT 10/10 unloading and accumulation table.

- Pressure-free system that preserves the quality of the product.

DV 500 ERGON Divider

- It is a compact and flexible system for dividing the bottles arriving in single lane from the DAT 10/10 into 4 or 6 lanes and laning them to the twin lane shrinkwrapper.
- Continuous-motion divider.

Conveyor Belts

- Equipped with automatic adjustment of the guides from below
- Fast and precise modification of conveyor belt parameters, such as width and height, automatically and without human intervention.
- Reduction of machine downtime.

Twin-Lane Shrinkwrapper SK 502 ERGON

- Hi-tech solution for twin-lane packaging of film-only bundles.
- High performance and energy saving thanks SMITEC ICOS motors equipped with integrated servo-drives.
- Reduced maintenance thanks to self-lubricating chains.
- Simplified format changeovers.
- Advanced automation and intelligent data analysis.

Automatic Palletising System APS 3090 ERGON

- Easy integration of the system into packaging lines.
- Low operating and maintenance costs.