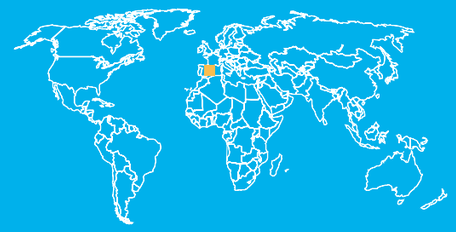
FOUNDED IN 1993, SANT ANIOL IS A COMPANY THAT HAS BEEN WORKING CONSCIOUSLY FROM THE MOMENT THAT IT WAS ESTABLISHED TO PRESERVE THE ENVIRONMENT AND MAKE THE WORLD A BETTER PLACE TO LIVE IN. AMONG THE COUNTLESS INNOVATIONS INTRODUCED TO PURSUE THIS GOAL, THIS SPANISH COMPANY USES A SMI ROTARY STRETCH-BLOW MOULDER MODEL EBS 8 KL ERGON, FOR THE PRODUCTION OF PET BOTTLES. THIS MACHINE IS EQUIPPED WITH "REDUXAIR", A HIGH-TECH SYSTEM WHICH, THROUGH THE REDUCED USE OF COMPRESSED AIR, ENSURES A REDUCTION IN ENERGY COSTS.

SANT ANIOL

- **SECTOR: WATER**
  SANT ANIOL
  Sant Aniol de Finestres, Girona, Spain
  www.santaniol.com
- EBS 8 KL ERGON Rotary Stretch – Blow Moulder



GEO LOCATION

SANT ANIOL
AGUA MINERAL NATURAL

SANT ANIOL WATER

AND PROTECTION OF THE ENVIRONMENT

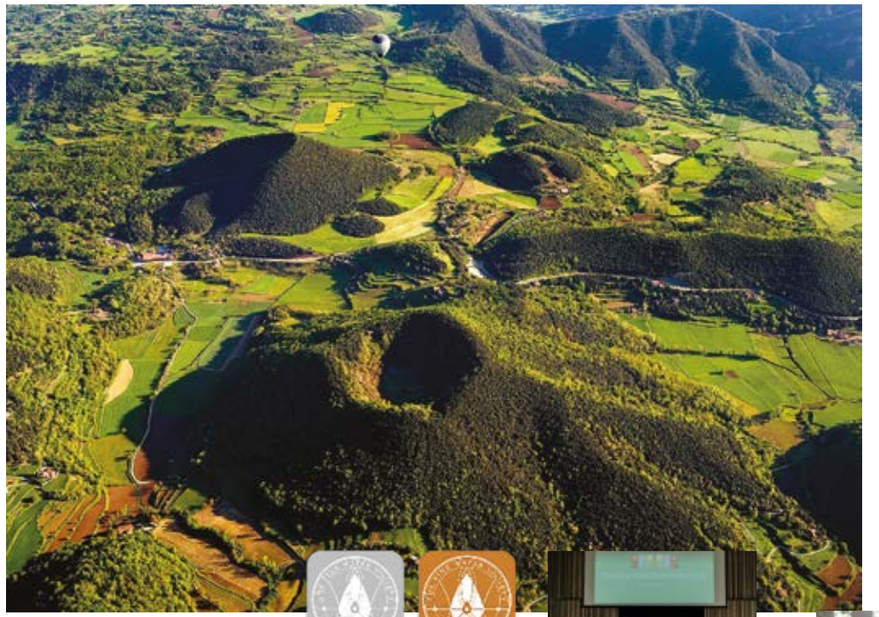
The Garrotxa region of Spain, located in the province of Girona, is well-known for its unique and impressive volcanic landscape.

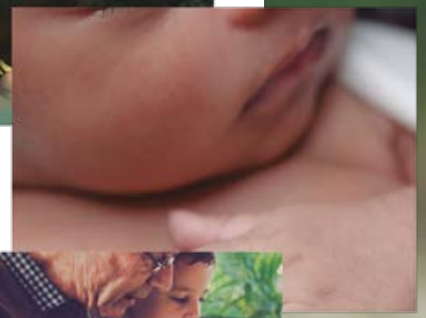
With the presence of more than 40 volcanoes, lush forests and green fields, the ecosystem of this area of Catalonia plays a crucial role in the formation of the precious Sant Aniol water, which, in 2024, won the SILVER prize for the tasting and the BRONZE prize for Design in the first edition of the "FineWaters 2024" International Water Tasting Competition organised by the Basque Culinary Center.

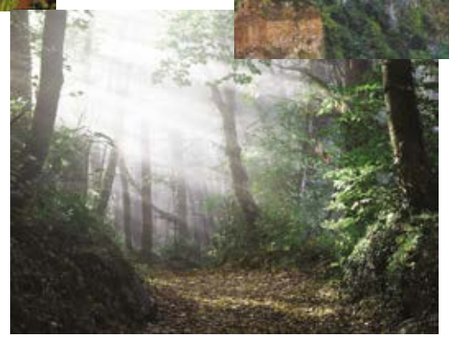
The award is a testament to the purity and quality coming from the volcanic environment, which promotes balanced water mineralization and highlights the Spanish company's strong commitment to excellence and environmental protection.

Sant Aniol also focuses on the optimisation and innovation of the materials used for packaging, minimising the environmental impact. Strict quality controls and the use of a production system free from human contact, are able to guarantee a contamination-free extraction and bottling process. Since 2018, the energy used in the plant has been 100% green, thanks to the creation of a 275-hectare security perimeter, the Spanish company also protects the water source from any contaminating activity.

The Sant Aniol spring is located within the Garrotxa Natural Park, at a depth of more than 120 metres, in a place characterised by sedimented lava and volcanic rock that gives the water purity and excellent qualities.

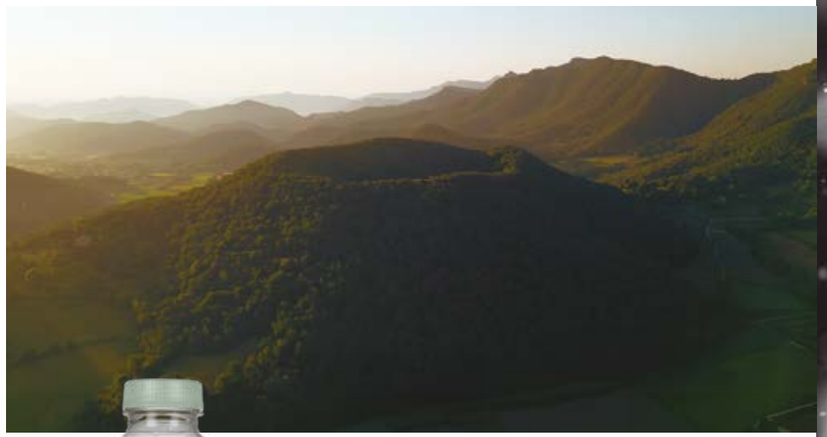






BOTTLES WITH
A VOLCANIC SPIRIT

Both the glass and PET bottles used by Sant Aniol have a unique, extremely elegant design, which stems from the idea of enhancing the qualities of a product that has been present in the best hotels and restaurants in over 20 countries, for over 15 years and that stands out in the points of sale. The design of the PET bottles produced by the EBS 8 KL ERGON stretch-blow moulder supplied by SMI, was born in 2015 by the Spanish artist and designer Martín Azúa, who created a special bottle for Sant Aniol, the surface of which, is inspired by the rocks of the volcanic stone of Garrotxa, where the water has its source.



WHO IS MARTIN AZÚA

Martín Ruiz de Azúa (Martín Azúa) is a Spanish designer born in the Basque Country in 1961; he trained at the Academy of Fine Arts in Barcelona and his works are part of important collections and museums such as the MOMA in New York.
He is a passionate observer of nature, which he incorporates into a lot of his works, especially in the ceramic objects he designs.
Martín Azúa states that design is important to the extent that it improves the relationship of each individual with the environment, ennobles people's work and the materials used in production.

**THE DESIGN OF THE PET BOTTLE LOOKS LIKE A JEWEL OR A PERFUME BOTTLE.
IT IS PRODUCED WITH VERY REASONABLE RESOURCES, BECAUSE SAVING EVEN JUST A FEW GRAMS OF MATERIAL IS VERY IMPORTANT FOR THE ENVIRONMENT.**

SMI SOLUTIONS FOR SANT ANIOL

Companies in the food sector, are now strongly committed to the green and digital transition and put the well-being of consumers and workers at the center of their production processes.
For Sant Aniol, the environment is a primary asset to be safeguarded and, to achieve this goal, the company uses the latest generation technologies capable of maximising energy savings.
15 years after the supply of an SMI stretch-blow moulder of the first generation SR 8 series, Sant Aniol has once again turned to SMI for the installation of the new EBS 8 KL ERGON model, intended for the bottling line of natural water in 0.33 L, 0.5 L and 1.5 L PET containers.
The great advantage of the new plant installed at the Sant Aniol de Finestres plant (Girona) is that it has an efficient system to significantly reduce energy costs.
The EBS 8 KL ERGON purchased by the Spanish company uses moulds equipped with the "ReduxAir" system, an innovative solution that allows stretch-blow moulding operations to be carried out at lower pressures than those traditionally used. Depending on the characteristics of the preform, the bottle and the working conditions, 15-20 bar is sufficient compared to the 30-35 normally used in this process.
This makes it possible to reduce the use of the high-pressure air compressor, with a consequent reduction in electricity consumption.

EBS 8 KL ERGON ROTARY STRETCH – BLOW MOULDER

Functions: stretch-blow moulding of PET bottles of natural water at a maximum speed of 16,000 bottles/hour.

Bottles worked: 0.33 L, 0.5 L and 1.5 L cylindrical containers.

Main features

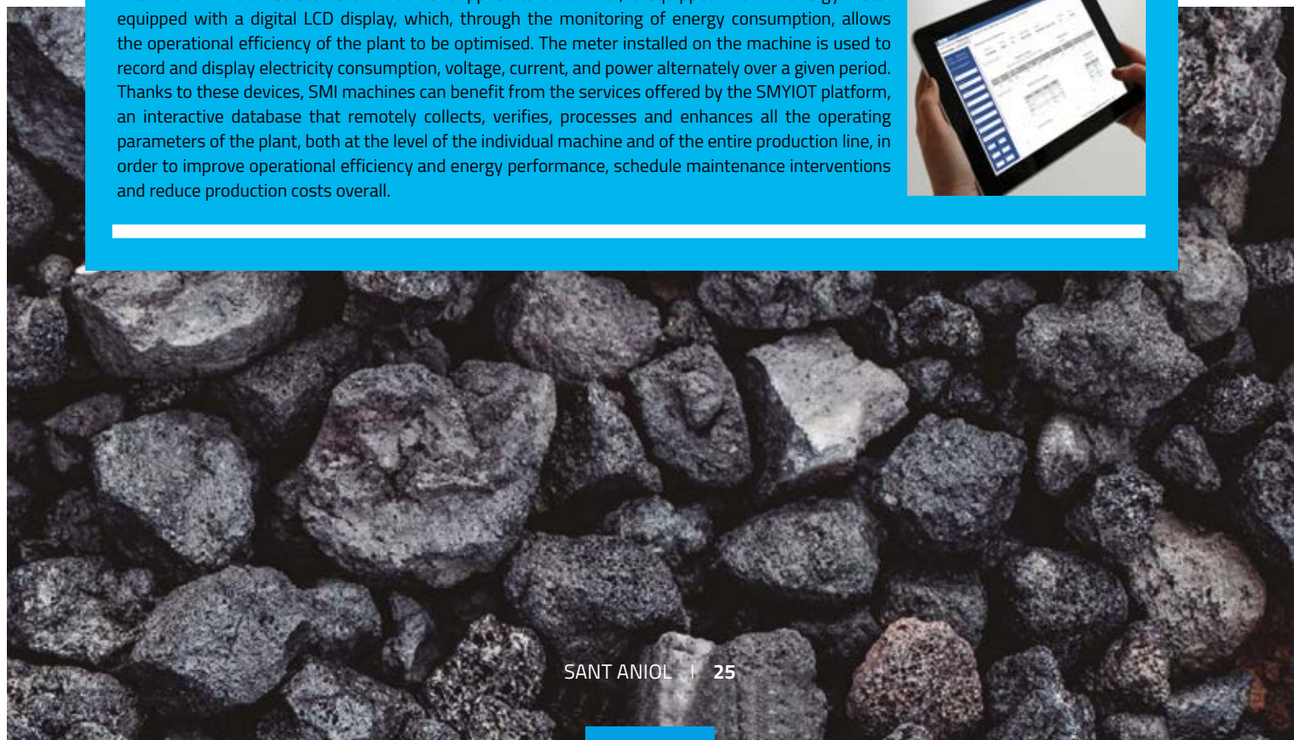
- the SMI stretch-blow moulder adopts solutions that ensure energy saving, such as the "ReduxAir" mould and the "AirMaster" air recovery system
- a plant suitable for the production of lightweight PET containers, which, through an appealing design, reflect the uniqueness of bottled water, promote the brand and minimise environmental impact
- compact, automated plant equipped with digital intelligence that meets the needs of efficient production and constant monitoring of machine consumption.

ENERGY - SAVING BENEFITS

The EBS 8 KL ERGON stretch-blow moulder is characterised by the presence of an innovative preform heating oven that is extremely compact and equipped with an aluminium diffuser that ensures optimal temperature control to prevent overheating. The energy costs for the production of bottles are also reduced thanks to the presence of energy-efficient IR lamps and heat-reflecting panels equipped with ceramic elements. The stretch-blow moulding module is equipped with a high-efficiency two-stage air recovery system, called AirMaster, which recovers the air from the blowing circuit and thus ensures a significant reduction in compressed air consumption and significant energy savings, thanks to the reduced use of the high-pressure compressor.

BENEFITS FOR ENERGY EFFICIENCY

The EBS KL ERGON stretch-blow moulder supplied to Sant Aniol, is equipped with an energy meter equipped with a digital LCD display, which, through the monitoring of energy consumption, allows the operational efficiency of the plant to be optimised. The meter installed on the machine is used to record and display electricity consumption, voltage, current, and power alternately over a given period. Thanks to these devices, SMI machines can benefit from the services offered by the SMYIOT platform, an interactive database that remotely collects, verifies, processes and enhances all the operating parameters of the plant, both at the level of the individual machine and of the entire production line, in order to improve operational efficiency and energy performance, schedule maintenance interventions and reduce production costs overall.



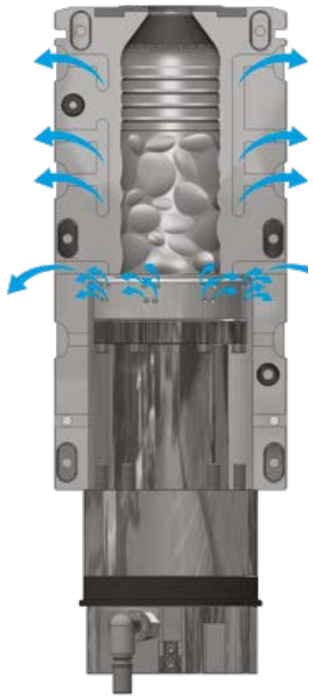
BENEFITS TO SAFEGUARD THE ENVIRONMENT

The solution developed by SMI to reduce the pressure of the blowing air used in the production process of PET bottles perfectly responds to Sant Aniol's goal of having technologies that minimize the impact on the environment, thanks to lower electricity consumption by the compressor, savings on energy costs and consequent less air pollution.
The EBS 8 KL ERGON stretch-blow moulder installed at the Girona plant is fitted with stretch-blow moulds equipped with the special "ReduxAir" bottom, which, through special technical and design measures, allows the air between the outer walls of the bottle and the surface of the mould to be released much faster, making it possible to produce rPET/PET containers with lower air pressures. especially:

- 0.33 L containers with air pressure at 15 bar
- 0.5 L containers with air pressure at 17 bar
- 1.5 L containers with air pressure at 25 bar

Of course, this value depends on the characteristics of the preform and the bottle and the working conditions in which the stretch-blow moulding process is carried out.
As it is well known, compressed air is produced by a high-pressure compressor powered by electricity, so the lower the level of air compression to be obtained, the less electricity the machine consumes. The special "ReduxAir" end cap was precisely created to allow stretch-blow moulding operations at lower pressures than those usually used (about 35 bar) and to ensure a green advantage to the companies that adopt it.

BELOW: QUICK RELEASE PATTERN OF COMPRESSED AIR WITH THE SPECIAL REDUXAIR END CAP



ACCURATE QUALITY CONTROLS **ON MOULDS AND BOTTLES**

The great advantage offered by the "ReduxAir" solution proposed by SMI to reduce the compressor's consumption of electricity can be obtained by applying some design restrictions regarding the shape and characteristics of the container to be blown.

Therefore, close collaboration between the customer and SMI engineers is essential to evaluate all the technical elements that may affect the applicability of the "ReduxAir" end cap to the production process of a specific bottle and offer advice on how to achieve the highest quality of the container.

In fact, the appeal of a container also depends on the accuracy and precision, with which the moulds used to produce it are made.

Therefore, countless tests and checks are carried out on both moulds and bottles in SMI laboratories to ensure excellent aesthetic results and ensure an efficient production process.

The use of sophisticated equipment allows us to perform dimensional checks and tests on the preforms used by the customer, in order to accurately measure the thickness of the same and the homogeneity of the polymer of which they are made.

SMI also performs other tests on blown bottles to ensure that the quality of the final product corresponds to the customer's expectations.

SAVE ENERGY WITH THE AIRMASTER AIR RECOVERY SYSTEM

The AirMaster air recovery system consists of two systems. The first basic system allows you to recover the air that is then used for the pre-blowing and service phase of the machine. Two valves are mounted on each stretch-blow moulding station: the first feeds the recovery system, introducing air into the line of the same, while the second discharges the air that cannot be recovered. In addition, the recovered air is taken to feed the machine's pre-blowing and service circuit. The working pressure of the pre-blowing and service circuit is managed by two electronic regulators. The second air recovery system complements the first and guarantees further savings in compressed air, because it takes part of the exhaust air and uses it exclusively for the blowing phase. Under certain working conditions, the AirMaster is able to enable reductions in compressed air consumption of up to 30%.

GARROTXA
NATURAL PARK

IF YOU ARE EAGER TO DISCOVER AN AREA WHOSE VOLCANIC ORIGIN HAS CREATED A UNIQUE NATURAL SPECTACLE AND GIVEN THE TERRITORY FERTILITY AND BIOLOGICAL RICHNESS, THEN YOU MUST PAY A VISIT TO THE COLORFUL NATURAL PARK OF THE GARROTXA VOLCANIC ZONE.

The Park, located in the province of Girona, in the north-east of Catalonia, has 26 nature reserves and represents the largest and best preserved volcanic area of the Iberian Peninsula, of great botanical and geological interest. The area has as many as 40 inactive volcanic cones, the most emblematic of which are those of Santa Margarida, Montsacopa and Croscat, the latter being the largest and youngest in Spain. The last eruptive episode occurred about 11,500 years ago, these lava flows helped make the plains and valleys fertile. Today, an extremely varied flora and fauna co-exist in the Garrotxa park, which make it possible to enjoy countless outdoor activities to explore the beauty of a unique area, but the Park is not just nature, it contains a first-rate historical and cultural heritage, with churches and castles, rural areas with farmhouses, ancient medieval nuclei and Romanesque monuments, modernist buildings and the interesting Volcano Museum. The vegetation is rich and varied, with a predominance of holm oak, oak and beech woods. There are also chestnut, hazelnut, alder, poplar and boxwood. The fauna is made up of species such as wild boar, wild cat, dormouse, stone marten and genet.

A JOURNEY THROUGH TIME TO DISCOVER GIRONA

The city of Girona is suspended between the sea and the mountains, protected by the Pyrenees that dominate and overlook the territory. Its strategic position has made it a coveted prey for different peoples and cultures. The many dominations that Girona has suffered have created a territory rich in history and interesting contrasts, since the city is of Roman origin and boasts excellent examples of medieval, Romanesque, Gothic and modernist architecture; For these reasons, walking through the historic center is like traveling through time. Another geographical peculiarity of the place is related to water: Girona is in fact located at the confluence of four rivers: Onyar, Güell, Galligants and Ter, the so-called "Pla de Girona", or Plain of Girona. The city is also the capital of one of Catalonia's most sensational destinations: the Costa Brava!