

# SIRMAKEŞ

## WATER SECTOR

**Sirmakeş**  
Beykoz, Istanbul, Turkey

- Smiform SR 10 stretch-blow moulder
- Smiflexi SK 600 F shrinkwrapper
- Smiline conveyor belts

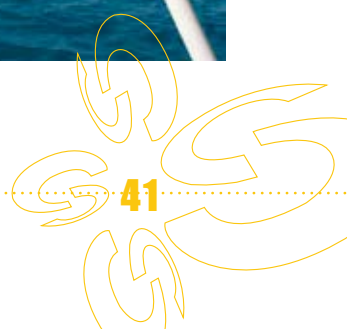


GEO LOCATION



Asia and Europe are like two lovers who want to stay together but cannot because of the Straits. Istanbul is the city which brings them together. For thousands of years this city has managed to combine the two continents and their different cultures. While on the one hand it gives life to the mystery of Asia, on the other hand it lets you get to know the European part. While in one corner you can see the mosques, the symbol of Islam, in the other you can admire the churches and synagogues, and the squares are filled with old buildings standing next to modern ones. The Beykoz neighborhood-district, located at the northern end of the Bosphorus Strait to the Black Sea, will put another spell on you.

This big neighborhood offers fabulous natural landscapes, where peace and tranquility reign among waterways, forests and the sea. The Sirmakeş water originates in these forests of unique beauty and purity, a water rich in tradition, which still maintains the goodness and purity of its origins, dating back to over a hundred years ago. Purity and goodness guaranteed not only by nature but also by the high-tech bottling plants provided by SMI to the Turkish company for the 18,000 bph production line of Beykoz: a Smiform SR 10 rotary stretch-blow moulder for the 0.33-liter, 0.5-liter and 1.5-liter PET bottles, a Smiflexi SK 600F shrinkwrapper and Smiline conveyor belts for handling loose bottles and packs.





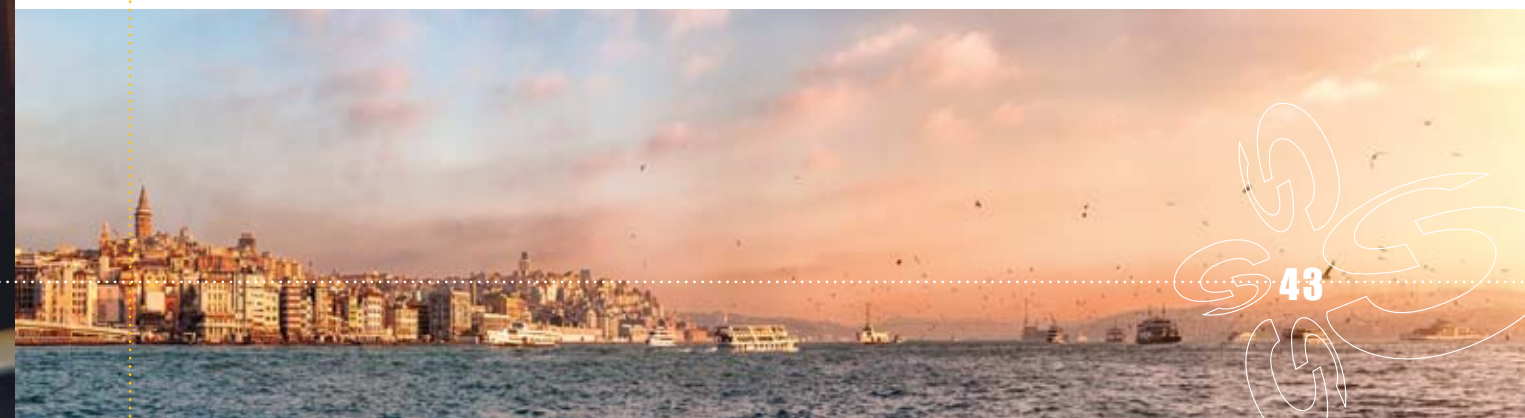
“ The purity of the Sirmakeş water has been handed down from generation to generation ”

# THE PURITY

## OF NATURE WITHIN EVERYONE'S REACH

The area in which Beykoz is situated had been inhabited since ancient times for its strategic position and natural beauty, combining the modernity of Istanbul on the one hand to the lush forests on the other. This is exactly where the Sirmakeş forest is located, owned by the well-known novelist and journalist Ahmet Efendi Mithat Beykoz, where water bearing his name has been flowing since 1900. The Sirmakeş water continues to flow even today, always in the same place and in the same village of Beykoz,

from the stream that is a veritable paradise of natural beauty. The purity of the Sirmakeş water has been handed down from generation to generation and is a true symbol of the tradition of the people who made the history of Turkey. The classic demijohn of Sirmakeş water was a precious gift that the Ottoman Empire used to send to other countries, which always accepted it with gratitude and which was used during the grand palace banquets, when ice cubes made only with this water were offered to guests. Today the times and customs have changed, people have changed, Istanbul has changed... but the Sirmakeş water has remained unchanged, its taste is still pure and its appearance crystal clear, as at the time of its origins. This drink is now on the market in different types of bottles, both glass and PET, with diversified shapes and capacities, able to satisfy the needs of consumers at any time of the day and at any event.





# ISTANBUL: BETWEEN ASIA AND EUROPE

**N**apoleon Bonaparte once said: "If the world were a single State, its capital would be Istanbul".

The capital of the empires ... the city that dominated a continent ... the cradle of civilization ... a meeting point of cultures and continents: these are just some of the many ways Istanbul can be described.

But words are not enough to describe this magnificent city, just as it will not suffice to read books about it to fully understand its uniqueness and charm.

Istanbul is Turkey's largest and most developed city, a unique place in the world with a special magic that drew entire states and empires to it over the centuries.

Many wars were fought in Istanbul, lasting many years, between those who wanted to take over it and those

who did not want to give it up.

Throughout its long history, this city (called Byzantium until 330, then Constantinople until 1453, Istanbul or Constantinople until 1930 and from then only Istanbul) was the capital of four empires: Roman, Byzantine, Latin, and Ottoman.

Also known by the name of "second Rome", Istanbul was one of the largest cities of Christendom until the Ottoman conquest in 1453, later becoming for almost five hundred years the capital of one of the largest empires in history as well as the crossroads of cultures.

Its rich history left significant archaeological and architectural treasures that make it a tourist center of global prominence and one of the most fascinating cities in the world where different cultures, populations and religions had the chance to meet.





## THE BEYKOZ DISTRICT AND THE MAGIC OF THE BOSPHORUS

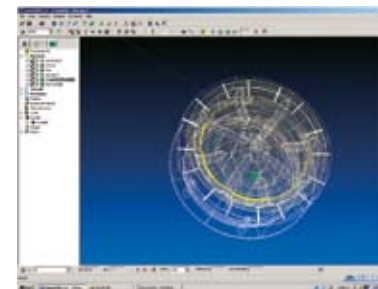
The Beykoz district, considered one of the 'coolest' ones in Istanbul, is located on the Anatolian side of the northern end of the Bosphorus and extends to the opening of the Black Sea. It is one of the most pleasant and calmest areas of the Turkish capital, surrounded by greenery, and is the home to luxurious villas inhabited by movie stars, members of Parliament and wealthy industrialists. In addition to being one of the most strategically important crossing points of history, the Bosphorus has always stimulated the imagination of its inhabitants, so much so that in ancient times it was the favorite place for rituals and sacrifices. In Greek, "Bosphorus" means "the passage of the heifer" and alludes to the myth that one day Io, the girl whom the god Jupiter (Zeus) loved, was stopped by Zeus while she

was returning to her father's house. He declared his love to her and asked her to make a home in the woods where no one would have harassed her and where he could go and see her any time he wished. Frightened, Io began to flee but Zeus chased her in the form of a cloud and coupled with her by wrapping himself around her. When Era, wife of the god, saw that strange and fast-running cloud, she instantly understood the betrayal of her husband but Zeus sensed her presence and had the time to turn the young Io into a white heifer. However, this subterfuge did not deceive Era, who sent a gadfly to torment Io with its bites, to the point that she jumped into the sea to escape Era. Io swam across Greece all the way to the Strait between Europe and Asia, which was named Bosphorus (the heifer's ford) in remembrance of her passing.

## WHEN THE BOTTLE is the corporate image

In a market where bottled drinks have reached levels of consumption of several billion pieces per year, it is clear that this industry's offer is so vast and different that it requires careful analysis of the final consumer's tastes and preferences to optimize marketing and sales strategies. One of the main tools bottling companies have to retain existing customers and attract new ones is the container through which their product is offered to the market: shape, color, material, functionality, innovation, ease of use, eco-friendliness, etc. are all key aspects in defining the right mix that leads to the successful sale of a drink and the success of a brand. To support its customers in this delicate phase, SMI provides an advanced CAD center for the drawing, 3D design and graphics processing of bottles and containers developed in collaboration with the customer's marketing and sales teams. After a careful analysis of the needs and demands that emerge in the meetings between the two companies, the idea of the container

takes shape, it is enriched and refined and finally converted into a detailed design and, if necessary, into an actual pilot sample. The large-scale production of the bottle/container chosen by the customer is performed by the moulds made of special aluminium alloy mounted on the Smiform stretch-blow moulders made by Smimec, a company of the SMI Group. Smimec has a specific department for manufacturing moulds and mechanical components, which is equipped with an FMS line consisting of 12 CNC machining centers. These are technologically advanced, fully automated machine tools running nonstop 24/7, even unmanned, which follow predetermined production programs (CAM). The 12 machining centers at the Smimec plants have a production capacity of over 15,000 moulds per year, are equipped with linear motors running at speeds of up to 80 meters per minute and fitted with spindles that reach speeds of 30,000 rpm. Consequently, the excellent finish and quality of the moulds is always guaranteed.





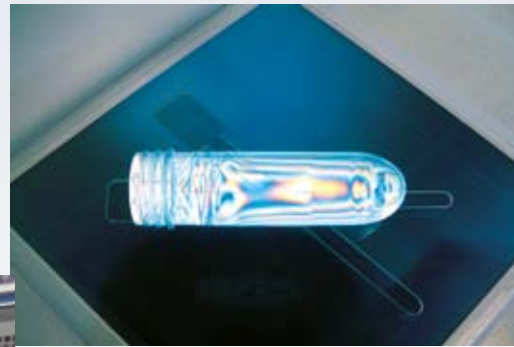
# THE ADVANTAGES OF SMI STRETCH-BLOW MOULDING TECHNOLOGY

Smiform's SR series rotary stretch-blow moulders provide impressive performance in the production of PET, PEN and PP bottles at the max speed of 36,000 bottles per hour. These containers are mainly used in the bottling processes of the food & beverage industry but also apply to the chemicals, pharmaceuticals and detergents sector. This series' high technological content, low cost of operation and maintenance, as well as the excellent quality/price ratio, are the ideal solution for producing plastic containers from 0.25 to 3 liters, with shapes ranging from the simplest to the most innovative and



sophisticated. Thanks to the cutting-edge technological solutions developed by Smiform designers, the stretch-blow moulders of the SR series rely on the accurate and precise heating profile of every single preform, which allows producing nearly perfect bottles even at high speed. In addition, before entering the heating module, equipped with infrared lamps, the preform is subjected to two different checks: the first one detects its size and vertical position, automatically rejecting all preforms that do not meet preset parameters, while the second one measures its temperature, stopping

the stretch-blow moulder in case the temperature of a certain number of preforms is outside the admissible range. At the exit of the heating module, a sensor detects the preform's temperature, compares it with the temperature set point and, if the two values do not match, increases or decreases the power of the heating module's lamps. "Intellicavity" technology makes it possible to manage and check each mould and, consequently, each cavity. The stretch-blow moulders of the Smiform SR series, available in models from 4 to 20 moulds, are also characterized by the low total cost



of operation and maintenance of the production plant. In fact, for example, the constant rotation of the blowmoulding carousel produces almost null inertial loads and helps reduce the consumption of electric energy whereas compressed air consumption can be limited thanks to the optional air recovery system. Thanks to the integration of the electrical panel in the heating module, the SMI-produced stretch-blow moulders feature a compact structure and don't take up too much space. This solution also allows eliminating the connecting cables (either hanging or on the floor) between the machine and the electrical panel, avoiding energy dispersion and making the workplace safer.

## QUALITY FIRST OF ALL

In addition to the material and finish of the blowing moulds, the quality of the bottle or container produced by the Smiform stretch-blow moulders also depends on careful tests and inspections performed on the preforms. Therefore, thanks to a modern laboratory equipped with the most sophisticated technologies, the preforms supplied to the customer enter the stretch-blow moulding process only after passing through quality control tests. Among these, for example, checking the size of the preforms via a camera and special parameterized comparison software is crucial, as it measures the preforms' thickness by means of infrared rays and also checks the homogeneity of the polymer through polarized light equipment. In addition, the containers are subjected to specific thermal control and mechanical tests at the end of the production process, to ascertain their suitability for the subsequent bottling, capping, labeling, packaging and palletizing stages. The Smiform laboratory devotes considerable resources to experimentation with new materials and applications, especially in the stretch-blow moulding of multilayered, eco-friendly, biodegradable preforms and in the field of nanotechnology.





# THE WORD TO THE CUSTOMER

## Interview to Emre Karabacak, Managing Director of Sirmakeş



From the left: Zafer Özcan, Sales Area Manager of SMI, with Refik Karabacak, Managing Director of Sirmakeş.



The starting point of Sirmakeş' success dates back to 1900; ever since, in just a few years it became, and still is today, a leading company in the production of bottled water. What is the key to this outstanding success?

"When Sirmakeş established its business in this sector the number of competitors was very limited

and, hence, being among the earlier operators in the bottled water market gave us a remarkable edge; however, a key role in Sirmakeş' success was played by the features and the quality of our products as well. Turkish consumers, indeed, have very different tastes as far as mineral water is concerned, but the water we produce can satisfy them all".



What are the main factors that pushed Sirmakeş to invest in the purchase of an Ecobloc® integrated system and in an end-of-line equipment supplied by SMI?

"The reason why we decided to invest in the purchase of a Smiform SR 10 stretch-blow moulder is the advanced technology that machine is equipped with and the full confidence we have in SMI; the latter, indeed, is a renowned and trusted company in Turkey and Sirmakeş is very satisfied with "the made in Italy" machinery this manufacturer has installed in our production lines".

Environment care, product quality and customer's wellness are the strong points of Sirmakeş. How important is the support given by technologically advanced machinery to the achievement of your goals?

"It is extremely important, since you have to invest in new technologies continuously if you want to win in

a highly competitive market; the introduction of innovative solutions allows us to improve our operating efficiency, adapt our production lines quickly to customers' changeable requests, provide high quality products and keep manufacturing costs low".

What role does the partnership with SMI play in the success of Sirmakeş?

"As already said before, one of the reasons standing behind our decision to invest in SMI's products is without doubt their remarkable technological content and the cutting-edge solutions they are equipped with, without forgetting, of course, the very good relationship I have with Zafer Özcan (SMI's Sales Area Manager for Turkey) and Paolo Nava (SMI's President and CEO)".

How important are for your company the support and the expertise provided by SMI?

"SMI is a company with a very strong sense of duty and work ethic; therefore, it invests every year huge resources to enhance its product range constantly. That allows SMI's customers to benefit anytime from the newest and most advanced technical solutions in the sector, so that they can run their production lines in a cost-effective, efficient and sustainable way".

What is your opinion on the future of Turkey's bottled water industry?

"A lot of market surveys, carried out both by government-backed institutes and private research companies, highlight a year-on-year growth of about 20% in the consumption of bottled water. One of the main reasons standing behind such strong a rise is the fact that Turkish consumers are becoming more and more aware of the benefits the consumption of bottled water brings to the human body; in addition to that, the strategical location of Turkey between West and East is an outstanding catalyst for both tourism and international trade, with a positive effect on economy growth and domestic consumptions".

