

*Pinar Su, Turkey,
invests in SMI line*

Turkey takes to the water

Pinar Su, is a producer of natural mineral water in Turkey. The company continues to invest in new solutions for bottling and packaging its products. Among the latest projects implemented by Pinar Su, the Turkish company decided to install a new bottling and packaging line of 6,000bph for large capacity containers (3.25l, 5l and 10l).

Water from the source

Driven by the increasing attention to health and physical well-being, Turkish consumers have, in recent years, boosted the demand for bottled natural mineral water that in 2011 reached a record 9.3 billion litres. The per capita consumption, equal to 126l each year, is today very similar to that seen in major European countries, evidence of the high level of development and well-being that the Turkish economy has now reached.

Pinar Su has been on the market since 1984. It was the first company to bottle and market natural mineral water in Turkey. Pinar Su water is bottled at the source in accordance with the highest quality standards and is marketed in Turkey and abroad under the name "Pinar Yasam Pinarim", which means "Pinar: my source of life".

The natural sources of Pinar water are located in three different areas of Turkey, unpolluted and far away from industrial or highly urbanised locations. The bottling plants of Bozdogan (Aydin province), Eđridir (Isparta province) and



Hendek (Sakarya province) feature the latest generation technologies for the bottling and packaging of pure spring water. For example, the filling operations take place in hygienically clean environments and the water is subjected to continuous chemical, physical and microbiological controls to test its quality during the various stages of the production process.

Blowing/filling/capping

The SMI line was purchased for Pinar Su's manufacturing plant in Hendek, a city of 45,000 inhabitants in the province of Sakarya, a few kilometres from the Black Sea coast. The beginning of the collaboration between SMI and Pinar Su dates back to 2005, when the latter purchased an automatic Smiflexi LSK 30 F model shrinkwrapper for shrink film packaging.

The Hendek plant has an annual production capacity of 607,000t, and bottles the Pinar natural water in 0.33l, 0.5l, 1l, 3l, 5l and 10l PET containers. The decision to install an "ad hoc" line dedicated to large capacity containers was dictated by the sharp increase in sales of these collations, the marketing of which joined the already consolidated one of traditional bottles from 0.33 to 1l. The "line engineering" project developed by SMI, taking into the account the demanding parameters specified by Pinar Su, has led to the creation of a new bottling plant for natural mineral water of 6,000bph.

The "turnkey" line supplied to the Turkish company for its Hendek plant includes a compact Ecobloc Smiform

system for stretch-blow moulding, filling/capping of PET containers of large capacity, a Smiline DV 500 divider, a Smiflexi SK 600 F model shrinkwrapper, a Smipack HA 60 handle applicator and a Smipal APS 3080 PR model automatic palletising system. The line also comprises the connecting conveyors among the system's various machines and ancillary equipment such as a rotary labeller and a loop winder with an airtight cycle for the protection of the pallets.

Smiform's integrated system installed at the facility of Pinar Su produces 3.25l and 5l PET containers at the speed of 6,000bph and 10l containers at 4,200bph. With only one machine the company can now achieve the production capacity achieved previously using two linear blow moulders with related filling/capping machines.

End of the line

There is a Smiline DV50 model divider at the Smiflexi SK 600 F shrinkwrapper inlet that sorts containers with a square base; this divider receives bulk products in a single row, divides them over multiple rows and channels them into the secondary packaging machine to be packaged in shrink film only. More specifically, the 3.25l bottles are grouped in the 2x1 and 3x1 collations while the 5l containers are grouped in the 2x1 collation and the 10l ones in the 1x1 collation. At the SK 600 F shrinkwrapper outlet there is an automatic Smipack HA 60 handle applicator that applies a handle to the 2x1 and 3x1 packs of 3.25l bottles, while the larger packs containing the 5 and 10l bottles pass by without being "fitted with handles".

Packages

The 3.25l packages or the 5l and 10l packages are then conveyed by Smiline belts to the inlet of the Smipal APS 3080 PR automatic palletising system, which gathers them on 800x1,200mm and 1000x1,200mm Euro-pallets. The palletiser installed by Pinar Su is a single-column system with two Cartesian axes with movements from the bottom. End-of-line operations are completed by a loop winder with a semi-airtight cycle that applies a special "dustproof" protection when the pallet is wrapped.

Custom labels and handles

Pinar Su has chosen to label its mineral water bottles produced at the Hendek facility with reel-fed labels applied through hot glue by a machine manufactured by PE Labellers. The labelling station is equipped with a servomotor, making it mechanically independent of the bottle carousel. This solution allows the automatic phasing of the machine with the label-application station, avoiding operator errors during format changeover. All operations are controlled by a PLC, which processes the work parameters set by the operator through a control panel or a touch-screen. Pinar Su has also decided to equip the 5 and 10l PET containers with a specific plastic handle applied by a specific machine installed downstream of the PE rotary labeller. Thus, the 3.25l bottles transit "idle" through the labeller but are then "fitted with a handle" by an automatic Smipack HA 60 model handle applicator, installed downstream of the Smiflexi SK 600 F shrink-wrapper that wraps them with shrink film in 2x1 and 3x1 collations.

www.smigroup.it

Pinar Su (Yasar Group)

Pinar Su is part of the Yasar Group, one of the largest industrial companies in Turkey. Founded in 1945, the Yasar Group today consists of 20 companies, directly employs around 6,750 people and has leading brands in the food & beverage sector, such as Pinar, and in the coatings sector, such as Dyo. This group also works in the paper production, trade, tourism and services sectors.

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