BIG BOTTLES, BIG SAVINGS

WITH THE INTEGRATED ECOBLOC® ERGON KL HC SYSTEM PROPOSED BY SMI, THE ENTIRE WET PART OF THE FILLING LINE IS GROUPED INTO A SINGLE SYSTEM, WHICH PERFORMS THE FUNCTIONS OF STRETCH-BLOW MOULDING, FILLING AND CAPPING.

Producing and filling PET containers with a large capacity of up to 10 L, all with a single machine, is increasingly the optimal solution for producers of mineral water and table oil.

This compact and flexible solution, offers numerous advantages in terms of reducing production costs, since the system does not require the presence of a rinser. In addition, the Ecobloc® Ergon system, does not need conveyor belts between the blow moulding machine and the filler and the relative accumulation, thus guaranteeing a controlled and flexible production process. All this translates into greater efficiency, for the management of the entire wet part of the bottling line by a single operator on an extremely compact surface, while improving the sustainability of production, thanks to reduced energy consumption.

Compared to other integrated systems available on the market, the 'combi' solution proposed by SMI offers a further advantage in terms of compactness of the structure, since the preform heating section and the stretch-blow moulding section of the machine are integrated into a single module.

The space-saving design of the Ecobloc® Ergon range: easily adapts to small bottling lines, reduces transport costs, because one container is enough to handle it and it lowers installation and start-up costs, since these operations can be carried out quickly and easily in a few days of work.

Green Solutions for the Primary Packaging

In the food and beverage sector, container design plays a decisive role in enhancing the brand and reducing the 'carbon footprint' of companies, which, more and more often, use containers and packaging materials with reduced environmental impact during production, use and disposal.

The integrated Ecobloc® Ergon KL HC systems are the ideal solution to produce and bottle liquid food and beverages at a maximum speed of 7,200 bottles / hour (depending on the characteristics of the container) in large containers, 100% recyclable, eco-sustainable, light and unbreakable, safe, with a high degree of hygiene and suitable for preserving the properties of the product contained in them.

Main Advantages of Ecobloc® Ergon KL HC Systems:

The preform heating oven mounts a system of heat-reflecting panels in energy-efficient composite material, positioned both in front and rear of the infrared lamps responsible for heating the preforms. This system ensures a high reflection of the heat generated by the lamps and consequently ensures a more uniform distribution of heat over the entire surface of the preforms. An aluminium diffuser is also integrated inside the oven

to ensure optimal temperature control and thus avoid overheating problems.

The stretch-blow moulding section is equipped with an 'AirMaster' two-stage air recovery system, which allows the basic air recovery system to be combined with a second circuit to recover and recycle part of the air coming from high-pressure blowing. This guarantees significant savings on the energy consumption of the compressor.

The stretch-blow moulding unit is equipped with a motorised rod system controlled by an electronic drive and without the use of mechanical cams, for precise management of the stroke of the stretch rod, an accurate control of its position and considerable energy savings compared to traditional solutions. This system allows you to change the stretch speed without mechanical intervention (replacement of cams).

The mechanical group of the mold is equipped with its own motorisation, which is responsible for performing with maximum precision the operations of ascent / descent of the bottom of the mould and opening / closing of the mould holder group.

The machine adopts a system of high-performance valves and low dead volumes, which allows the reduction of energy and compressed air consumption. Optimisation of blowing cycles also ensures high operational efficiency.

The insulation system between the dry area of the blow moulding machine and the wet area of the filler, guarantees the perfect separation of the two modules.

The inlet of the filling product and the return of the washing product, take place in the lower part of the machine through a ceramic manifold equipped with double gaskets (one sealing, one safety), complete with inspection light. This leads to the net separation between 'wet' manifolds (CIP product and return) and 'dry' manifolds (electric and pneumatic), as well as high durability.

The filling and capping modules have a modular frame, with no welding and equipped with access doors to the structure made of tempered glass, highly resistant and durable over time.

Filling module equipped with electronic gauges to ensure high filling accuracy.

The areas of the machine, in contact with the product to be bottled, are entirely made of stainless steel and glass, for a high level of hygiene.

The optimisation of the arrangement of the carousels inside the frame has made it possible to obtain reduced blind spots, to the advantage of the productivity of the plant.

Quick format change of bottle guidance equipment and filling module mounts dummy bottles with automatic insertion to ensure a quick product changeover and reduce operator intervention.

From the point of view of size, 'high-capacity' containers, such as 5, 8 and 10-litre bottles, are arousing growing interest from companies in the beverage sector, that are attentive to 'green' and energy-efficient solutions for their plants.

The use of large bottles, allows to bottle a certain volume of product in a smaller number of containers, thus reducing the logistic, handling and disposal costs of the entire supply chain.

SMI has decades of experience, both in the construction of machines for the production of large capacity containers, and in the design of bottles that meet the functional and aesthetic needs of customers.

The 'tethered caps' on PET and rPET bottles, which remain attached to the bottle after being opened, will become an everyday object for European consumers from 2024, when the EU Directive 2019/904 comes into force. Aware of the challenges that this new legislation poses to food and beverage manufacturers, SMI have studied a series of innovative solutions to produce rPET containers compliant with Directive 2019/904, supporting customers in choosing the type of bottle and tethered cap that best meets their specific needs.

www.smigroup.it

West Europe Water Dispense Up 17% Over Five Years

The West Europe water dispense market expanded by 3.8% to reach 3.65m units at the end of 2022, according to the latest research report from Zenith Global. Over the past five years, the sector has grown by a remarkable 17%, adding more than 500,000 units, despite the impact of covid and recent economic disruption.

Bottled water dispensers accounted for a record level of almost 2m units, 53% of the total but down from 56% in 2017. Bottle-free mains water dispensers, known as point of use, also reached a record of close to 1.5 million units, 40% of the total and up from 38% 5 years ago. Multifunctional, integrated tap systems for businesses exceeded 250,000 for the first time, making up the balancing 7%. Over the five years, integrated tap systems were the fastest growing segment, achieving a 35% uplift.

The largest five markets in West Europe were the UK with a 22% share, followed by Spain on 20%, France on 14%, Italy on 11% and Germany on 10%. Collectively, these countries accounted for a combined 76% of units installed, a marginal increase on 2021. Spain was the best performing country over five years, with average annual growth of 11%.

"In terms of market value, industry revenues have now surpassed €1bn," commented Zenith Global Commercial Consulting Director Akos Petri. In fact, they climbed an impressive 11.2% in 2022 to reach €1.17 billion for the year."

Zenith forecasts continued steady growth for West Europe water dispense market, rising a further 18% to more than 4.3 million units in 2027.