

# PET AND rPET HIGH-CAPACITY CONTAINERS

IN THE BEVERAGE INDUSTRY, CONTAINER DESIGN PLAYS A KEY ROLE IN THE ENHANCEMENT OF THE PRODUCT AND THE COMPETITIVENESS OF THE COMPANIES, THAT, IN ORDER TO MEET THE CONSUMERS' VARIOUS NEEDS, INCREASINGLY USE SUSTAINABLE CONTAINERS WITH DIFFERENT SIZES.

EBS KL HC ERGON stretch-blow moulders: the ideal solution to produce PET and rPET containers up to 10 litres.

In terms of size, high-capacity containers, such as 5, 8 and 10L containers, arouse growing interest, especially in the companies that pay attention to green and cost-saving solutions. By using high-capacity bottles, in fact, fewer containers are

required to reach a certain product volume and therefore, logistic, handling and disposal costs are reduced.

SMI has decades of experience in the manufacturing of machines for the production of high-capacity containers,

as well as in the design of bottles that meet customers' functional and aesthetic requirements.

The EBS KL HC ERGON series of stretch-blow moulding, available both in 'stand alone' version and in 'combi' version, integrated with filling and capping systems (ECOBLOC® ERGON series), ensure high performances in the stretch blow-moulding of rPET, and PET bottles of different shapes and capacities up to 10L.

## Neck-In-Bottle

SMI develops innovative containers, such as the stackable 'Neck-in-bottles', that, thanks to a particular design of the hollow of the bottom, offer the advantage of: Optimising the space of the pallet, reducing the packaging costs: the board interlayer pads are not needed, lower transport and storage costs, thanks to the higher number of bottles on each pallet, reducing the waste: the bottle necks are subject to fewer breakages during the palletising phase





and improving the aesthetic aspect of the pallet, that results more compact and that can be graphically customised.

### Sustainable Containers

Within the circular economy concept, all the main bottling companies require innovative packaging solutions that ensure economic and energy saving.

All bottling and packaging solutions supplied by SMI are inspired by Industry 4.0

and Internet of Things (IoT) principles and ensure cost saving, energy saving, environmental sustainability and higher competitiveness.

SMI has invested heavily in solutions for producing rPET bottles and for supporting companies in the study and graphic realisation of a wide range of high-capacity containers that are 100% recyclable of high quality and lightweight for saving energy and material.

### Main Advantages of EBS Series

Stretch-blow moulding system based on a high efficiency rotary technology, equipped with motorised stretch rods for a precise management of the stretch rod cycle and a significant energy saving.

Ultra-compact plant: the preform heating section is integrated with the stretch-blow moulding

section in a single module.

Reduced energy consumption, thanks to the preform

heating module equipped with high efficiency IR lamps and to the stretch-blow moulding module equipped with a double stage HP air recovery system.

Ergonomic structure that ensures an easy maintenance and a high safety level.

High performance low dead volume valves, that reduce pre-blowing and blowing times, therefore improving efficiency and quality of the bottles.

Easy and fast format changeover, thanks to MotorNet System® automation and control system that ensures constant maintenance of the optimum processing parameters and the direct modification of the machine settings.

### Main Advantages of the ECOBLOC® Series

The integration of stretch-blow moulding, filling and capping functions into a single machine allows to considerably reduce costs, as well as the space occupied by the solution, since the rinser and conveyors between the stretch-blow moulder and the filler are not needed. This also leads to reduce contamination risks and to reach a higher hygiene level.

High-efficiency rotary stretch-blow moulding system equipped with motorized stretch rods, whose functioning, controlled electronically, does not need mechanical cams. This allows a precise management of the rod path and an accurate control of its position, as well as a significant energy saving.

The carousel blowing process has been reduced, thus making the stretch-blow moulder more efficient by 17 %.

The filling process is extremely precise, thanks to the use of the flow meter, an electronic device installed near each valve that detects the flow of the product that fills each bottle by counting the pulses and sends the filling valve the closure sign, once the value of the format in use is reached.

A wide range of products can be filled thanks to the valve terminal that is changed according to the type of product.



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