



SMI solutions for Águas de Carvalhelhos

Label-free bottles

Carvalhelhos is a benchmark in the water sector in Portugal and one of the leaders in the export market. The Boticas-based company focuses on the environmental sustainability of its production processes. Therefore, the company chose a new EBS 8 KL ERGON stretch-blow moulder by SMI, for the production of new rPET containers without plastic labels. This eco-friendly solution eliminates the need for glue and additional paper or plastic materials, simplifying the recycling process and ensuring higher purity in recycled PET, SMI summarises.



110 years of Carvalhelhos

The origins of Águas de Carvalhelhos trace back to 1915, with the founding of Caldas Santas de Carvalhelhos. Since its founding, this Portuguese company has focused on quality and the production of naturally bottled mineral water.

Anticipating shifts in consumer packaging trends, Águas de Carvalhelhos became one of the pioneers in Portugal to adopt PET plastic for food-grade containers. Recognising its potential early on, the company invested heavily in technology to support large-scale PET production. Today, Águas de Carvalhelhos continues to blend tradition with innovation. The introduction of new PET bottles, available in 0.33L, 0.5L, and 1.5L formats, features a label-free design made possible by advanced moulds from SMIMEC, installed on the EBS 8 KL ERGON stretch-blow moulder.

This process customises each bottle with an embossed Carvalhelhos logo and essential product information, including Braille, directly engraved onto the packaging, eliminating the need for paper labels and reaffirming the brand's role as a pioneer in environmentally conscious solutions.

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The Portuguese company has involved SMI for the supply of a new rotary stretch-blow moulding system from the EBS 8 KL ERGON series and for the study and development of new PET and rPET containers with and without plastic labels.

Benefits to safeguard the environment

Solutions that respect the environment, as they do not require the use of glue and paper or plastic labels, ensuring greater purity of the recycled PET material. The area dedicated to the label has been removed, eliminating the ribs typically found in traditional bottles. Therefore, a combination of embossed and debossed engravings on the bottle body provides additional space for the brand logo and essential product information, which would traditionally appear on a label. This approach also allows for the inclusion of information in braille.

Management and control

The solution supplied uses the so-called MotorNet System, which ensures the constant maintenance of the optimal processing parameters during the entire production cycle, allows the direct modification of the machine settings from the operator panel, simplifies format change operations and offers the possibility of temporarily disabling one or more moulds if necessary. The Posyc operator interface is simple and intuitive, ensuring quick parameter adjustment and facilitating routine and scheduled maintenance tasks. The EBS 8 KL ERGON stretch-blow moulder is also equipped with the latest generation

of instruments to detect, monitor and compare the system's energy consumption.

Energy saving

The stretch-blow moulder is equipped with a system of energy-efficient thermo-reflective panels in composite ceramic material, positioned both in front and behind the lamps, which allow uniform heat distribution. The stretch-blow moulding carousel is equipped with motorised stretch rods controlled by electronic drives, for precision operations and energy savings - no compressed air is needed, and the power consumption is lower than solutions with linear motors, says SMI.

Production efficiency & flexibility

The EBS 8 KL ERGON stretch-blow moulder is equipped with high-performance valves and low dead volumes (-50%) reducing pre-blowing and blow moulding times. The blow moulding machine adopts a series of measures capable of reducing the level of wear of the components to the benefit of production efficiency, such as the gripper handling system based on springless preform grippers/bottles equipped with desmodromic cams and plastic bearings.

Thanks to the preform feeding system equipped with adjustments by means of numerical position counters, format changeover operations are simple and fast. Even the format change operations, to switch from the production of traditional bottles to bottles without a label, are simple and fast as it is sufficient to replace the graft section in the mould.

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