

Idea &amp; Design

Technology

Blow Mould  
Manufacturing

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Meet us at drinktec in Munich - Hall 5 / C5 - 230

## Compact, efficient and environmentally sustainable solutions

**drinktec**

 SMI Group  
Hall A6 – Booth 403

The topics of energy efficiency and environmental sustainability play a key role in the investment choices of companies that have increasingly been opting for compact and efficient systems and machines, capable of ensuring an environmentally sustainable and high-quality production. SMI will present in world preview the new compact EBS KL Ergon rotary stretch-blow moulder at Drinktec.

The project has begun after the success of several technical innovations introduced on the stretch-blow moulders from the EBS K Ergon range, that has met for several years the needs of a growing number of middle-sized companies within the primary packaging sector. The need to meet the requirements of higher production speeds led SMI designers to develop the new series of ultra-compact rotary machines called EBS KL Ergon (where the letters KL stand for "Kompakt Large"), suitable for meeting production requirements up to 25,000 bph. The new series is composed of models up to ten cavities for the stretch-blow moulding of PET / rPET / PP / PLA containers up to 3l, available in stand-alone as well as in Ecobloc version, integrated with electronic filler and capper.

### EBS KL: compact and high-performance stretch-blow moulders

One special key factor of the new compact blow moulder by SMI is that the preform heating section (heating tunnel) is integrated with the stretch-blow moulding section (carousel) into a single, very compact module that makes the system suitable for the installation even in small bottling lines. The production speed up to 2,500 bph per mould (0.5l format). The structure that embeds the heating tunnel and the carousel is equipped with slightly rounded safety doors, which increase the space inside the machine in order to perform cleaning and maintenance operations easily and safely.



The stretch-blow moulding carousel is equipped with motorised stretch rods, whose functioning, controlled by electronic drives, does not require pneumatic cams; this is a new solution that ensures a precise management of the stretch rod path and an accurate control of its position, as well as a considerable energy saving (compressed air is not required and the consumption of electricity is lower compared to the solutions with linear motors). And finally thanks to the cam-free technology it is possible to modify the stretch speed without mechanical interventions (replacement of cams), as the servo-motor automatically adjusts according to the production speed (up to 2.4 m/s). This solution reduces the machine vibrations and the adjustments to be performed in case of format changeover.

### Preform heating tunnel

EBS KL Ergon stretch-blow moulding system is equipped with a specialised preform heating tunnel with a compact design, that is integrated with the stretch-blow moulding carousel into the same machine module. The preform feeding system is equipped with adjustments by means of position numeric counters, that speed up the format changeover operations. The staggered position of the spindles allows to adopt optimised chain pitches according to the preform diameter and to shorten the heating tunnel length, thus reducing the number of preforms inside the heating tunnel, as well as the waste and the consumption. Furthermore, the preform gripping spindle unit is equipped with a new system of diffusers, without spheres and with gasket, for the heat dissipation, which allows to reduce the component wear. For heating the preforms in transit the infrared lamp units are equipped with thermo-reflective panels made of energy efficient ceramic material, placed on the lamp front and rear. This solution is claimed to ensure a high reflection of the heat generated by a more uniform distribution of the heat over the entire surface of the preform. Finally, a new ventilation system of the heating tunnel is equipped with high-capacity centrifugal fans, that take fresh air from the bottom and channel it to preform body and neck. This system reduces the temperature of the preform neck with advantages in terms of thickness optimisation and elimination of the ovalisation and deformation of the preform neck and ring.

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