

Ultra-compact blower for improved bottle output

With 30 years' experience in the packaging industry, **SMI's** new series of EBS K ERGON stretch-blow moulding machines are ultra-compact and influenced by the internet of things.

In 2017, SMI celebrates its 30th anniversary. These 30 years have been characterised by countless challenges and innovative ideas that have made the history of packaging, and turned SMI into the reference point for many businesses in the food and beverage, dairy and detergents sectors.

Since 1987, SMI has been developing cutting-edge projects and technologies in order to offer turnkey bottling lines and flexible, ergonomic efficient packaging machines, increasingly inspired by the key concepts of Industry 4.0 and the internet of things (IoT) for totally automated production systems. The company's latest developments are part of the 'new age of bottling' and the 'new age of packaging' design platforms, and some of them were showcased at Interpack 2017 in Düsseldorf, Germany. At stand 14D12, SMI exhibited the world premiere of the new, ultra-compact EBS K ERGON stretch-blow moulder in ECOBLOC configuration along with an electronic volumetric filler.

Benefitting from the technical innovations of the EBS (Electronic Blowing System) ERGON series machines, SMI has developed a new line of ultra-compact rotary blowers, called EBS K ERGON, suitable for outputs up to 8,800 bottles an hour (0.5L format). The new models, available in two, three and four-cavity versions, offer all the advantages of rotary technology, with an output range traditionally achieved by linear blow moulders (from 3,000-4,000 to 8,000-9,000 bottles an hour).

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The new EBS K ERGON stands out in its market segment for a long array of advantages:

- The pre-form heating section (tunnel) is integrated with the stretch-blow moulding section (blowing wheel) in a single, very compact module, which can be installed even in small-size bottling lines. The tunnel features a horizontal pre-form feeder chain, and an optimised ventilation and aeration system. Moreover, the infrared lamp units heating the pre-forms are equipped with a system of thermo-reflective panels made of a highly energy-efficient composite material, and are sited in front of and behind the lamps. This technically advanced solution ensures excellent reflection of the heat generated by the IR lamps

and consequently ensures a more uniform distribution of heat over the pre-form's entire surface.

- The structure containing the tunnel and the blowing wheel is equipped with slightly rounded safety doors, which provide more space inside the machine to perform cleaning and maintenance tasks easily and safely.
- The stretch-blowing wheel is equipped with motorised stretching rods controlled by digital drivers that do not require mechanical cams. This innovative solution ensures precise control of the stretching rod's path and position as well as significant energy savings.
- The stretch-blow moulding system uses high-performance, low dead-volume valves that reduce pre-blowing and blowing times.
- The mould's opening, closing and locking operations are actuated by a dedicated brushless motor, which ensures the utmost precision in the up-down motion of the mould bottom, and in the opening and closing of the mould-holder unit.
- The whole system is managed by the proven automation and control MotorNet System, which simplifies format changeover operations.
- The blowing pressure is automatically adjusted according to the bottle format, offering unquestionable advantages versus manual adjustment solutions employed on linear blowers that SMI's EBS K range aims to replace.

The most innovative feature of the EBS K series is the module. The EBS K ERGON stretch-blow moulding systems feature an innovative pre-form heating module with an extremely compact design that allows it to be integrated into a single, compact machine module alongside the stretch-blow moulding carousel. The inner section of the machine module is also equipped with an aluminium air diffuser, which provides optimal temperature control and prevents overheating problems. Additionally, the EBS K blowers also come with the AirMaster two-stage air recovery system.

The new EBS K ERGON rotary stretch-blow moulders boast a very attractive quality to price ratio and also allow huge savings on installation and start-up costs, as the compactness of the system permits these operations to be carried out in just one day. ■

Further information

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