BOTTLE ZONE AT NPE2018 South Hall 14089

Next generation stretch-blow moulder

Since commencing production in 2010, 1Blow has been producing next generation stretch-blow moulding machine ideally suited for the custom PET bottle converter. And, in 2018, these limits are said to be pushed further with the commercial launch of the new 4LO stretch-blow moulder. The 4LO is built upon the same, efficient virtual-rotary platform that has been commercialised in numerous industrial applications around the world over the last six years. At its core, the 4LO possesses all of the superior 1Blow machine features and benefits.

Rotary motion is the key to achieving high-speed and low energy consumption in machinery through its unique Virtual Rotary Concept. Over 90% of the 4LO Machine Motions are rotary with a maximum mechanical output of 2,000bph and machine efficiencies of +95% which are in-line. All of the main machine motions on the 4LO are affected by servo motors. Known for their repeatability and reliability, servo motors are most energy efficient motion system. 1Blow said that comparative operational testing to similar sized competitive machines has demonstrated that their machines can use up to 60% less energy and they are said to be the cleanest and quietest stretch-blow moulding machines.

The 1Blow clamp format and stretch-rod pitch were designed for all blow mould formats currently being used. This research, combined an open architecture format allow 1Blow machines to accommodate blow moulds from virtually all other competitive SBM machines on the market. This ability allows customers to utilise existing blow moulds on a 1Blow machine, some of the company's customers are using two or three different blow moulds. The 1Blow can be configured to accommodate the most widely manufactured and lowest cost blow moulds available. The 4LO was designed to minimise the number and quantity of change parts with the goal of reducing format costs for converting customers. Another benefit of minimising the number and quantity of change parts is that it takes less time to do a machine changeover in some cases the machine has 50% less change parts.

Despite its compact footprint, the 4LO has superior internal accessibility for technicians. Virtually every external body panel of the machine is actually a door which opens completely. The Virtual-Rotary Concept is spatially efficient and provides many open areas inside the machine large enough to comfortably accommodate a technician. Four technicians can be inside the machine at the same time.

The 4LO machine goes to the Next Generation with its platform's ability to accommodate all of the five key technology kits with a maximum mechanical output of 8,000bph. 1Blow said that this is perfectly suited for the both the custom bottle moulding demands and production outputs of the North American Market. The five key technology kits are:

Preferential & offset neck heating

This technology kit produces opposing longitudinal heating bands to the preform to optimise production of oval or oblong bottles.This technology goes one step further by also allowing for these heated bands to be moved off-axis from the preform centerline; so that offset neck bottles can be produced.

Neck orientation

This technology kit puts all the neck finishes on each and every bottle to be in the same orientation. This is invaluable for containers that use a flip-top cap so that it aligns in the proper position for opening and pouring. 1Blow can do this alignment without the need of a tab or V-notch on the preform. The 1Blow servo-driven mechanical system relies only on the thread start, and thus can use standard preforms; opening up the spectrum of preforms that can be used.

Heat set

This set combines heated blow moulds with recirculating high pressure air cooling to induce higher crystallinity into the bottles. This higher crystallinity allows the resultant bottles to have heat resistance to the hot fill process.

Base inversion

This technology kit is a multi-staged mould base system that allows for the base push-up of the blow mould to be moved up in two or more increments and allows for the creation of a diaphragm base. On heat set bottles this acts to absorb the vacuum created after the liquid contents cool in hot fill bottles.

Sure grip

This technology kit allows for the production of bottles with a hyper-extended grip into the bottle that could not be produced in standard stretch-blow moulding processes. It utilises software and hardware on the machine combined with a multi-staged mould insert system that allows for both opposing handle grip contours to be moved inward during the stretch-blow moulding process.

1Blow invites the visitors to its booth to experience the 4LO first hand and to see and learn of all of its features, benefits, and advantages, and why it also just might be the greenest stretch-blow moulding machine on the market today.

www.1blow.com