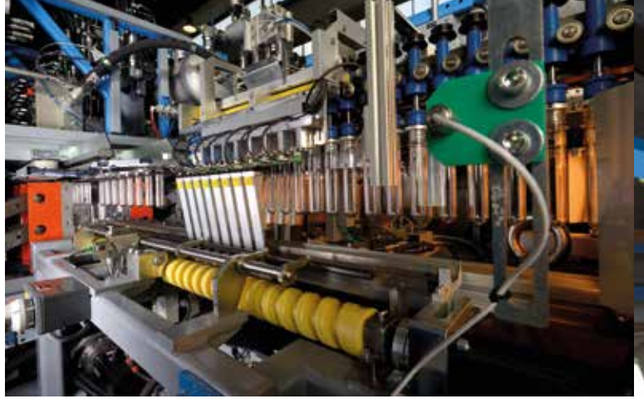
LINEAR STRETCH-BLOW MOLDING IS UPGRADED

The next generation of SFL EVO linear stretch-blow molding systems is nearing completion. SIPA has been working its magic once again to introduce numerous upgrades in terms of speed, quality, versatility, capability, energy efficiency, and overall sustainability. All the new developments, together with the low cost of maintenance, result in the lowest total cost of ownership, TCO, on the market.



GROWING FAMILY

SIPA is introducing the new generation of SFL EVO machines step-by-step. It began in 2017, when the SFL 6/8 EVO was unveiled. The full range of SFL EVO 6 types is available, with the number of cavities ranging from three to eight, according to size. Oversize blowing press dimensions, XL and XXL, cater for taller and larger bottles respectively. The SFL EVO 4 is now available in versions with up to five-cavities, as well as SFL EVO 4 XL versions with various levels of cavitation. The pitch of the ovens also comes in two sizes, for bottles with different neck diameters, opening up the possibility of more precisely tuning energy heat output to neck/bottle type.

BEST IN CLASS

Improvements introduced into the new machines will ensure that the SFL EVO family retains its "Best in Class" position among linear systems. Output has been validated at up to an genuine 2000 bottles per hour per cavity, which is 10% higher than the previous generation and beyond the reach of any other system on the market today. That means an eight-cavity unit can produce 16,000 bottles every hour, in sizes in the range from single-serve up to 1000mL. Higher output is due to such factors as faster press movements and improved blowing valves. Despite this significant increase in capacity, energy consumption is lower than on the last generation of machines. Production of the common multi-serve 5L size is faster than before too: up to 7,500 bph can be blown in a unit measuring barely 36m^2: that's an outstanding solution for customers looking to about 40,000 liters per hour!

MAXIMUM VERSATILITY

The range of container types that SFL EVO units can produce is close to limitless: round, oval, oriented neck, long neck, wide mouth, hot-fill, handled (in-mold or post-mold), refillable containers with thick walls, as well as collapsible contains with very thin walls, and many more. It is possible to produce small bottles and big ones, all the way up to five-gallon water cooler bottles and even beer kegs.

PRECISE CONTROL

Machines are fully electric, which means (among other things) that they are very clean and very precise. Installation and start-up times are very short. Controls are very comprehensive but easy to use at the same time, thanks to new HMI software and a large touchscreen.

ECHO

SFL EVO is designed to exploit ECHO, SIPA's new customer lounge providing full on-line remote support, immediate collection of operational data (making it easy to monitor performance, even on mobile devices), digital manuals and spare parts navigation, tracking of service requests, interactions, and shipments.
Smart movements
Important new features include a smart clamping unit with "dynamic stroke." Servo drives make it possible for the user to choose from three different strokes, so they can optimize output. New SFL EVO machines (with a few exceptions) accept all existing SFL molds.

LESS AIR

Blowing blocks and the air circuit have also been further optimized. So, for example, dead air volume has been reduced by around 30%, with ARS PLUS valves integrated into the blowing blocks. The service air circuit has been optimized, as well as all piping and connections, simplifying daily use, maintenance and troubleshooting.

SIMPLE MOLD CHANGES

There is also a new mold changeover procedure. Molds can now be removed in a single block, eliminating the need to remove the base assembly before the cavity backplates.

QUALITY MEASURES

Quality control measures are of the highest order on the next-generation SFL EVO. Camera systems can be integrated to check incoming preforms and outgoing containers, in order to obtain closed-loop control, and reduce container variability. There is also a new development to assure lack of leaks: immediately after blowing, an additional station checks for container integrity. This is a mandatory quality-gate for high-value products, since it eliminates the need to perform additional checks on a separate machine before filling.

SINCRO CONNECTION

The new SFL EVO machines also exhibit evolutionary improvements elsewhere. A new preform transfer system, for example, handles the preform necks more gently; and the "SINCRO" connection to enable integrated bottle blowing and filling has also been improved, with a compact and clean system to release blown bottles to a rotary filler star-wheel now possible.

CO_2 REDUCTION

To meet the daily challenge of plastic container production, it's important to remember once again that PET container production involves lower CO_2 emissions than other materials. SFL EVO (as well as XTRA) has been designed to easily process rPET (post-consumer recycled PET), and blow preforms from the XTREME RENEW system, which begins with flakes. Both the oven heating and blowing processes are perfectly suitable for matching high sustainability requirements. Reducing use of fossil oil is the best way to reduce CO_2 complementing the benefits of lower energy consumption and improved scrap reduction.