

The flexible portfolio of French blow molding specialist 1Blow allows customers to select exactly the functionality and service options they need. The young company has earned rapid acceptance in markets around the world with a design philosophy based on compact dimensions, energy efficiency and comprehensive service – qualities it has developed with its automation partner B&R.



Imagine heading to the concession stand of a major sporting event to get a snack and getting to watch a custom PET bottle formed and filled with a new soft drink right before your eyes. This impressive marketing stunt is just one example of what you can do with a compact blow molding machine from 1Blow. The machine's small footprint allows it to be moved with a forklift and installed right where it is needed. Combined with a filler, a 1Blow machine could produce thousands of custom bottles each day of an event.

Global markets take notice

Since its founding in 2010, 1Blow has already sold 52 machines all around the world. The blow molder's compact dimensions and reliable operation have certainly contributed to its success overseas. The biggest advantage of the machines, however, lies in their flexibility. With five standard platforms that mold PET preforms up to 12 liters, the company offers machine functionality à la carte.

Big names in the beverage market have taken an interest in the innovative design concept. Danone, for example, uses a 1Blow machine at its R&D center in Evian. Coca-Cola uses 1Blow machines for its markets in Africa, and a large cosmetics group is currently exploring new packaging



1Blow's blow molding machines have such a small footprint that they can easily be moved with a forklift.

solutions with a 1Blow machine. To handle the growing demand, the company will be opening a testing lab for its customers by the end of this year. "This secure R&D cell will include a pilot machine for testing different molds and materials, as well as a grinder," reveals 1Blow's sales director Olivier Perche.

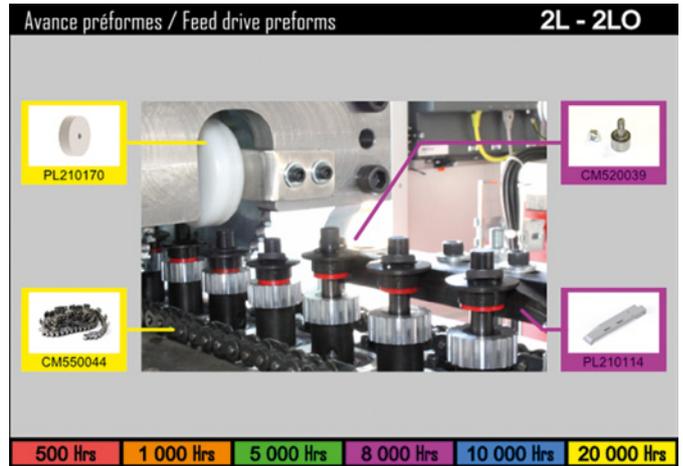
Flexibility and more

1Blow machines already meet the primary demands of what has been called "Consumption 4.0" – namely proximity, customization and environmental friendliness. 1Blow's versatile portfolio allows customers to design machines that can mold complex bottle shapes with handles or angled necks, bottles that can be filled with hot liquid or printed directly at the machine's outfeed.

But the young machine builder isn't satisfied offering variety alone. Looking to add ten-minute mold changeover times to its repertoire, the company set out to find a partner for automation and process control. At B&R, 1Blow found a specialist that shared its focus on technological innovation. As one of the very first companies to combine control, HMI and motion technology into a single device, B&R's products offer higher speeds, better reliability and faster response times through seamless integration.

Integration and engineering

"Given the output rate of our machines, B&R offers the technological benefits our customers are looking for," says Fabrice Bernard, automation engineer at 1Blow. "Moreover, we can have complete control over every aspect of the automation system." The fully integrated B&R solution allows 1Blow to control the communication of all machine components – a key factor when it comes to performance optimization. Further optimization came with B&R's new



Step-by-step preventive maintenance via the touch screen uses pictures and color coding to unmistakably identify parts and their replacement intervals.

ACOPPOS P3 servo drive. With a housing no larger than a conventional single-axis drive, the three-axis P3 helps reduce the size of the control cabinet by two-thirds and make 1Blow machines even more compact.

"The central engineering platform allows us to reduce development times and lower costs throughout the whole project lifecycle," adds Bernard, referring to the B&R Automation Studio software development environment, which provides universal access to everything from controls and drives to HMI and safety technology. "While ultimately helping us move toward autonomy," says Bernard, "B&R has provided outstanding engineering support along the way."

Green performance

1Blow's all-electric machines highlight the company's emphasis on energy efficiency. Once a bottle has been blow molded, excess compressed air is routed to a tank that feeds other functions requiring lower pressure. Together with B&R, the company is currently exploring a solution to retrieve energy from the stretch rods using the principle of regenerative braking. 1Blow machines also feature an Eco program – which sets the machine into sleep mode when there is no preform in position – as well as an ISO 50001-compliant energy consumption metering card.

Integrated B&R systems have clearly proven their benefits in terms of energy efficiency. At one customer, 1Blow ran a side-by-side comparison, molding 750-milliliter bottles with its own 2-cavity machine versus a comparable machine from a big-name competitor. "Seeing the 54% difference in energy consumption really hit home with that customer," recalls 1Blow's managing director Benoît Sanchez.



Olivier Perche
Sales Director, 1Blow

"As our single source automation partner for 1BLOW PET blow molders, B&R's expertise in every aspect of the automation system makes our machines reliable, fast and reactive – qualities our customers really appreciate. B&R's worldwide presence builds customer confidence and contributes to the success of our export sales, which today represent 80% of our business."



1Blow's all-electric blow molding machines are equipped with a complete automation solution from B&R, including servo drives and frequency inverters controlled via a POWERLINK network.

Flexible maintenance

B&R has proven its ability to anticipate future trends like the integration of intelligent maintenance, fitting 1Blow molders with a totally secure maintenance solution. Spare parts are displayed on the touch screen in the form of photos, operators are guided through step-by-step maintenance and troubleshooting and can browse documentation using keywords and pictograms – features that shorten the learning curve for beginners and temporary workers.

By integrating the new B&R remote maintenance solution into its blow molders, 1Blow makes diagnostics and maintenance even easier still. "Customers with a secure remote maintenance connection can choose to have us take over control or request preventive remote maintenance," adds Perche. "Essentially, we're now able to offer an à la carte service contract with our machines that accommodates any maintenance needs our customers may have."

A bright future

B&R solutions help 1Blow react more flexibly to changing market demands by making it easy to add options, such as a leak test feature to ensure optimum bottle quality. At the moment, the two companies are working on a solution that will allow its machines to communicate with other blow molders or other equipment on the same line such as secondary packaging machines or palletizing cells.

It is undeniable that the flexibility offered by B&R systems – which has already won over major industry players like Krones and Sidel – saves time and costs on the long term through more economical operation and maintenance. With export sales accounting for 80% of 1Blow's turnover (€3.2 million in 2015), markets the world over are clearly taking notice. ←