PET BOTTLE IN DAIRY

PET bottles open new market segments for dairy products

Primarily used for the packaging of beverages, PET bottles are regularly gaining shares on the dairy market, where they meet new consumption needs. Used for fresh milk, flavored milk, drinking yogurt, probiotics, soya milk and all new dairy based, high value products, PET bottle is definitely the preferred packaging for new market segments within the dairy industry.

Taking into account the benefits brought by PET bottles and the advantages of on-site blow molding while capitalizing on its proven experience in the field of dairy packaging, Serac proposes a single bloc blow-fill-cap unit tailored to the needs of niche and emerging markets: the Combox H2F.

PET bottle: the ideal packaging to stand out from the competition and get milk out of at the breakfast table

White milk drunk at home, mainly by children and for breakfast, remains the highest market in volume for Liquid Dairy Product (LDP) around the world. Growth on this particular segment is however limited and competition is harsh. One of the main reasons why PET bottles succeed on this segment is because they allow brands to differentiate from competition in the shelves. First, PET can be blow-molded with a wide variety of shapes and sizes and thus offers much more possibilities than cartons. With its own design, your brand is immediately recognizable. Second, with its typical properties, PET better reveals the value of the product it contains than HDPE. This is why the glossy appearance of PET bottles with UV barriers now stands for quality on ESL products, whereas glass-like transparency is becoming a standard for premium fresh milk.

But PET bottles also help LDP manufacturers seize new consumption trends as opportunities to grow their global market and develop value-added segments. Offering
unique benefits to consumers in terms of convenience (easy to handle, re-sealable, shock-resistant), PET bottles perfectly fit the on-the-go consumption needs and thus enable LDP to move from breakfast table to lunch boxes, schoolbags, pockets and sport.

PET bottle is also the preferred packaging for single-serve portions of products such as probiotics, vitamin and mineral enriched milk or meal substitutes. These products are targeting health conscious consumers and help extend LDP consumption beyond childhood.

Choosing PET and on site blow-molding: cost savings associated with better quality

PET has proven ideal for producing lighter though highly resistant bottles. The material bi-orientation achieved through the two-step stretch blow-molding process provides high toughness and resistance to internal pressure, and enables thin PET bottles to be stacked as high as glass ones. Cost-effectiveness of PET thus starts with saving on raw materials.

But it is the cost of bottle transport and storage, together with a growing concern for quality and food safety that leads manufacturers to invest in on site blow-molding units. Purchasing small preforms instead of blown bottles drastically reduces the transported volumes as well as the risk of having bottles scratched or distorted, while on-demand production avoids to waste money on storage. On site blow-molding also gives more flexibility on packaging lines, as a simple mold changeover allows to produce different packaging shapes or sizes on the same line. Finally, as far as food safety is concerned, on-site blow moulding offers the best level of guarantee against pollution of the bottles.

Serac’s SBL blow-molding technology concentrates on PET heating process

Having gained experience in PET blow-molding over the past few years, Serac knew where were the keypoints to precision and repeatability before the company started designing its stretch low-molding unit. By concentrating its efforts on controlling the heating process of preforms and maximizing time allocated to heating and blowing, Serac is able to stretch light weight preforms up to their limits with an homogeneous bottle thickness and not risk of neck deformation.
Combox single bloc blow-fill-cap units: a step further in cost-effectiveness

The concept of associating packaging production and filling functions in a single bloc unit, already widely spread within the dairy market for cartons, pouches, cups or bottles is now proposed by Serac for bottling lines operating at low to medium outputs, under the name Combox.

The Combox concept is first of all based on a compact and ergonomic design that allows to save 25% on packaging lines footprint and to have a single person monitoring the unit.

Operating costs are lowered as well, with energy savings up to 10 kW/10 meters as a result of the absence of conveyors, and even lighter bottles thanks to a 100% positive transfer system patented by Serac, which ensures that bottles will move all along the process without ever touching each other and thus avoids any risk of damage.

But the Combox concept also allows manufacturers to benefit from higher production yields. The blow-fill-cap unit downtime is reduced to a minimum, thanks to quick mold changeovers that require around 10 minutes of one operator, simplified maintenance operations and the avoidance of production starts and stops potentially associated with accumulation systems.

Combox H2F: the only blow-fill-cap unit dedicated to dairy products manufacturers operating under 12,000 bottles per hour (1L)

Designed to meet the low to medium output needs of niche and emerging markets, as well as those of mid-sized dairy products manufacturers, the Combox H2F raised enthusiasm from the dairy industries.

Combining all the technologies that made the reputation of Serac on the dairy market, the Combox H2F is also the only blow-fill-cap single bloc unit equipped with a rotary weight filler for output levels under 12,000 bottles per hour. The net weight filling technology, a specialty of the group for over 40 years, offers great benefits in terms of filling accuracy and reliability, Clean In Place (CIP) facilities and maintenance.
Derived from Serac’s know-how in aseptic filling and integrating numerous components originally designed for such applications, the clean filling environment of the Combox H2F meets the hygiene requirements for chilled dairy products, but requires neither water nor chemical treatment for bottle and cap decontamination which is done with pulsed light.

With its Combox H2F cost-optimized to be within reach for a maximum number of manufacturers, Serac definitely opens new perspectives on the dairy market.