

A regular intake of fluid is healthy. More and more, it is never out of place. Thus, suppliers and fillers worldwide are attracted by the demand for billions of units of flexible pouches in addition to the packs already in use.

Quench your thirst with pouches.



Pouches: everyone wants them

Flexible expansions for beverage packs

As far as many food and beverage experts as well as packaging experts in this interesting field are concerned, consumption of food and beverages in the near future will look something like this: a shop or self-service vending machine can be reached from practically anywhere on this world, at which the consumer can obtain some food, a snack (which can also be heated up on the spot within the pack) or sweets as well as the suitable beverage. Since the consumer is likely to be even more restless and thus even more fickle in future, it is supposed to be irrelevant whether he wants to consume warm, cold, liquid or solid food or drinks.

Preferably presented in such a way that consumption is possible using one hand only. I.e. in spite of the fact that he is holding a snack in his hand, the consumer can, for example, quench his thirst from a little, flexible pouch – worn perhaps like a watch around his wrist! Vision? Future? Definitely not! Because all the types of packaging needed to make this possible are already available. All sorts of different pouch systems and films for food products and beverages, with the only real restriction that carbonated soft drinks or beer are rarely filled in them. For, carbon dioxide likes to expand uniformly, and flexible pouch systems are not very good at coping with the effects of this.

Special reclosable closures – Smart Spout.



Photo: Seaquist/Löffler

Impressive figures

Many established packaging companies and beverage producers are nevertheless focussing on flexible pouches in an attempt to challenge existing packaging. Quite apart from this, there are other major application areas where enormous numbers of flexible pouches or what are known as stand-up pouches are used for food, pet food and non-food products. According to data from Schönwald Consulting, Erlangen/Germany, more than 7 billion units for pet food and about 4.6 billion units for food products in Europe by 2008. Starting from a level of 4.5 billion units and 2.8 billion units in 2003. Schönwald estimates that total global consumption in all segments was 33 billion stand-up pouches in 2003. The company calculated

the following orders of magnitude for Europe in 2003: 80 billion PET containers, 40 billion liquid cartons, 35 billion beverage cans, 30 billion sterilisable food cans and already as many as 9.6 billion stand-up pouches.

Other figures from the beverage industry are based on total figures indicating developments from 1993 onwards: there were only about 2.5 billion pouch units in all areas then, half of them being used for beverages. This source found out that the total number of stand-up pouches in 2001 was already 11.1 billion, with 4 billion of them being used for beverages. Almost 24 billion stand-up pouches are expected here by 2006, 7 billion of them being beverage pouches. This corresponds to annual growth rates between 1993 and 2006 of 16.9 per cent in total and of 12.4 per cent with beverages!

It is therefore no surprise that all the beverage technology suppliers and beverage packaging specialists as well as numerous experts in the flexible packaging material industry are working in this field. Whether they process glass, PET, other plastics, make beverage cans or board laminate, all suppliers want to be able to supply flexible pouches as an alternative, to round off their packaging concept. For flexible packaging materials offer a series of advantages: excellent printability, large display areas on the flat pouch sides without corners on the retail shelf, the combination of properties – particularly barrier properties – by using what are often multilayer laminates, easy cooling and heating and much more besides. Not to mention the minimal material input and the convenience benefits, such as: simple to transport without the need for much space, unbreakability, with or without drinking openings, reclosable etc. Stand-up pouches now also make a good impression on filling machines, even if they cannot by far match the outputs reached by PET, glass or can fillers. It is supposed to be possible to fill a 200 ml reclosable pouch (a cap-spout pouch) at speeds of “considerably

more than 300 pouches/minute” at a filling plant in the USA.

System costs are the crucial factor

What are crucial for all competitors in this segment are the system costs right down to the transport packaging. They can only be optimised after lengthy experience in this field and, above all, with the help of these systems, because the packaging materials are flexible, as their name says. A printed laminate can, for example, be produced locally, close to the filling operation, or finished blanks can be bought. Per blank including a straw at less than 4.33 grams per pack for ice tea or orange juice. A 12 µm outer layer of PET, 8 µm of aluminium and 75 µm of PE form such a laminate, to which printing ink and adhesive for the laminate are added. And the reduction in material input never stops. The market leader in this field manufactures and licences the production of billions of pouches. To beat him, the other players are trying to reduce material prices by 15 to 20 per cent.

Up and coming trends

With flexibles, there are always new developments regarding materials. Now, in the run-up to K' 2004 and interpack 2005, the following can be expected: aluminium in board laminates is to be replaced by plastic films. The experts say that there are also other ways to achieve barriers and printability. PE laminates are said to be on the advance, and more so PP. There is interest in PET films as well, although the blown film manufacturers have not been able to follow these trends completely. The vision specified by the beverage experts is a 7-layer laminate without aluminium, including PP for heat stability (150 – 160°C), because this material costs 30 per cent less than PET. Such a flexible laminate could also be suitable for the attractive area of particulate food products. ■