

EVERYTHING UNDER CONTROL ...WITH ONE SINGLE CLIP

The new Bottle Carrier for multi packs

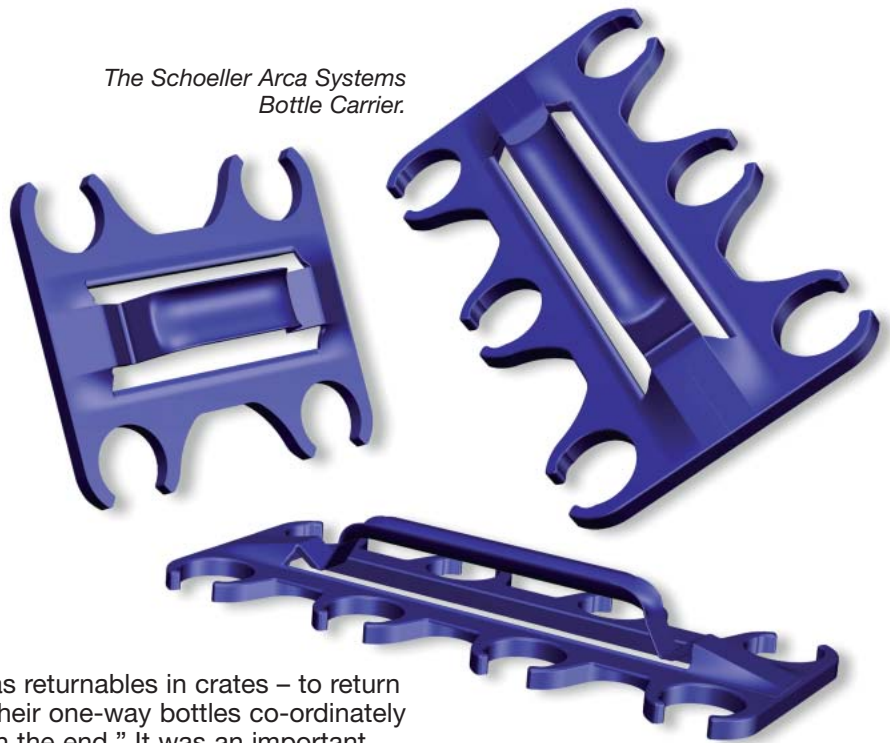
The Bottle Carrier history starts with a beer sixpack that was supposed to be kept "bottomless" for promotional reasons – namely without cardboard packaging. Clip six bottles in the tabs of a polyethylene carrier – and that is it. For this purpose, the Bottle Carrier principle was invented in 2003 by Schoeller Wavin Systems, predecessor of today's Schoeller Arca Systems. At the moment, the first products of Gerolsteiner, the German market leader in mineral water, are introduced in 1.5 l and 1 l bottles in the new carrier system.

Gerolsteiner Brunnen was a development partner for the new carrier and packaging system. Carolinenbrunnen of Bielefelder Wüllner Mineralquellen, Germany, and Peterstaler Mineralquellen, from the Black Forest in Germany had started the serial production of 1.5 litre bottles in the carrier on a regional basis already some time before. With a "very positive feedback on the part of the trade" according to reports of the outriders' representatives. Other beverage producers in Germany and abroad were also very interested as Schoeller Arca's contact persons disclosed.

Optimum POS positioning

What's the decisive strong point of the Carrier other system cannot perform? Why did Gerolsteiner urge to further develop the former promotional carrier system for PET one-way bottles and returnables? Why do so many enterprises increasingly think about getting their bottles under control in that vein? "Just because this is the perfect way enterprises can make sure that their beverages are properly presented", Erwin Treiber, Schoeller Arca's leader of the Bottle Carrier project hits back. Apart from that, the Carriers can be perfectly integrated in the logistic processes of the enterprise and are very comfortable for the customers. They can use them – exactly

The Schoeller Arca Systems Bottle Carrier.



as returnables in crates – to return their one-way bottles co-ordinately in the end." It was an important development parameter to ensure that the bottles could be clipped back into the Carrier again once they have been clipped out. And this must be repeatedly possible, as well in the market itself where particular bottles might be removed from the Carrier for presentation, or other sorts else can be clipped in for take-away – without having to accept messily torn films and bundles of residual bottles that are not portable any more.

Characteristics by comparison

"Costs are absolutely within the habitual limits", Schoeller Arca

assures. The price per Carrier is 7 Euro-Cent per 1.5 l-PET-Six-pack. Thus, it is more expensive than the pure transparent shrink film, however lower-priced than the printed film package.

Moreover there's a small environmental plus related to the Carriers: They are made of recycled bottle crate, or cap material. With 67 kW/h, the packaging machine for the Carrier solution only requires about half the energy of a shrink film packaging machine according to the manufacturers' specifications.

So this is a purely logical and systematic development?

May be, however there is a slight disadvantage that could not completely be done away with: The classical film with roughly 24 grams is still a bit lighter than the Carrier. The difficulty lied in the detail here since the Carrier had to be solid, but also light and flexible. The solution: A framework of cross beams inside the Carrier distributes the influencing forces uniformly and is clearly lighter and more flexible than a massive plastics cable. The lightweight construction Bottle Carrier now weighs 28 grams with the 1.5 l-Sixpack version and endures all the drop tests, torsional tests etc. carried out in quality test series without problems. The next critical point was the handle. A high and comfortable handle as with the original Beer Promotion Carrier Prototype was indeed pleasant to the touch, but could not be piled up on pallets without indirections such as intermediate layers. The handle would have also been an obstacle during the fully automatic processing. The handling was too complicated and too expensive. So the handle was folded downwards by means of a clip that had to be small enough to pop up automatically through the weight of the full bottles, but big enough to guarantee carrying comfort. Apparently "no big deal" which however constitutes the sticking point for the prospects of the new Bottle Carrier System on the market.

From the idea to production and processing

Peter Suhling Automation which is situated in Suhr-Brinkum in Lower Saxony, Germany was the partner for the plant construction. Together with this expert of special manufacturing systems engineering and process automation, both the machines that produce the Bottle Carriers in the Schoeller Arca factory in the Bavarian-Swabian city of Monheim and the machines that pack the bottles into the Carriers have been developed.

The Carriers are supplied from above and the bottles are pressed into the holds in a merging lane system by means of star-shaped wheels. In order to take all



The bottles can be clipped back again once they have been clipped out, even repeatedly. Also in the market itself where particular bottles might be removed from the Carrier for presentation, or other sorts else can be clipped in for take-away.

advantages this system bears compared with the shrink film packaging where the bottles cannot be sorted out, the next step integrates camera-controlled-turning pick-up-systems with a Siemens S 7 control.

These adjust the bottles individually, but without stopping on the running conveyor turning the brand label decoratively outside at the same time. Therefore, the EAN codes of the individual bottles are positioned inside and

cannot be confused with the code of the entire package when it is read in.

In order to ultimately fix the individual bottles for palletising, a 5 mm plastic band, or, optionally, a printable adhesive tape is tightened around the bottles where the EAN code for the entire package is also applied on. For this, Suhling has developed an appropriate system which does not coat the bottles vertically as usual, but circumnavigates



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them horizontally with an arm in order to keep the bottles exactly aligned.

There are three existing construction stages of the Bottle Carrier packing machine at the moment: One for up to 8 000, one for up to 18 000, and one for up to 30 000 bottles per hour. Moreover, a semi-automatic plant has been developed for promotions, market tests, etc, which amounts to approximately 80 000 Euros and, compared with the fully automatic plants requires only scarcely the tenth part of investments.

A competitive edge in development, however, seldom goes without copy-cats. There are already one or two speculations about possible imitators rumouring within the trade. When do we have to face that? Project manager of Schoeller Arca Erwin Treiber faces it calmly. Schoeller Arca has applied for patents for the Carriers. Suhling has the patents for the machine construction processes.

The most important thing the Bottle Carriers mean to Schoeller Arca that has previously mainly been concerned with the bottle crate and thus with the returnable segment, however, is the access to the permanently growing market of one-way systems, a potential for new national and international markets. “Naturally,” Treiber remarks, “we still do not lose track of our brewery clients either. After all, the system saves six to eight Cent per unit compared with the cardboard Beer-Sixpack.” And neither has the PET Sixpack in the Bottle Carrier always to be a sixpack.

No matter whether four big, or eight smaller bottles: “The Bottle Carriers are a bottle carrying system of the future”, predicts Günter Huber, managing associate of Bottle Carrier development partner Peterstaler Mineralquellen. “Being an enterprise with an innovative aspiration, we have already been searching for a Carrier solution similar to the one in the USA also for the German market for some time. In so far, the Bottle Carrier as a solution with a better acceptance and quality has come in quite handy. This is confirmed by our market tests. They are markedly positive.” (mlw) □