

PRESS ARTICLE

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SIDEL STARLITE™ BASE LEADS TO LIGHTER WEIGHT AND BETTER PERFORMANCE FOR CARBONATED SOFT DRINKS BOTTLES



Carbonated soft drinks (CSD) producers can now take advantage of the better bottle performance and lighter weight of the award-winning Sidel StarLite™ PET bottle base.

Sidel StarLite is a uniquely shaped base that increases the overall resistance and stability of PET bottles. It can also reduce the amount of PET material needed to produce the finished bottle, allowing for reduced wall thickness for an optimum strength-to-weight ratio. The result is a bottle that uses less raw materials and therefore weighs less, requiring less energy to produce, yet delivering better pallet stability and improved bottle integrity throughout the entire supply chain. Sidel StarLite does all of this without compromising on the safety, hygiene or the integrity of the beverage contained within the bottle.

Several Sidel customers have trialled the StarLite CSD bottle base and have already achieved impressive results, including significant improvements in resistance to stress cracking. Under the rigorous test protocol of the International Society of Beverage Technologists (ISBT), the new base lasted 30% longer for 0.5 litre bottles, 50% longer for 1.5 litre bottles and 60% longer for 2.0 litre bottles. The base successfully completed the ISBT 24-hour creeping test under 45°C conditions, compared with 38°C required under standard testing. This means the base has better resistance and is less likely to burst during production or deform during transport. This also results in more stable pallets.

Base weights can be reduced by up to 20% for 0.5 litre bottles (from 5g average to 4g), 19% for 1.5 litre (from 9g to 7.3g) and 17% for 2 litres (from 12g to 10g). These lightweighting opportunities

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can lead to cost savings of up to EUR 331,000 per year for 0.5-litre lines, EUR 563,000 per year for 1.5-litre lines and EUR 662,000 per year for 2-litre lines (Sidel data*). Under controlled conditions, the new CSD base can be blown using as little as only 16 bars of air pressure compared to the 25 bars average for 0.5 litre bottles, saving on energy use as well. The 1.5 litre bottles can be blown with as little as 18 bars compared to the 26 bars average, and 2 litre bottles with only 20 bars compared to the previous 28-30 bars average. Again, this can lead to annual savings of up to EUR 78,700 (Sidel data**). Due to its compatibility with the Sidel Matrix™ system, output rates can be as high as 2,300 bottles per mould per hour for 0.5 litre bottles, 2,250 bottles per mould per hour for 1.5 litre bottles and 2,000 bottles per mould per hour for 2 litre bottles, depending on conditions and specifications.

Laurent Naveau, Packaging Care Manager at Sidel, comments: “The carbonated soft drinks segment remains the second most popular after water with about 220 billion litres consumed in 2013, representing 28% of the global non-alcoholic beverage market. Around 40% of this amount is packaged in PET. These huge figures help explain why we are constantly striving to help beverage producers worldwide unlock value from their CSD bottles.”

He continues: “One way of doing this is to reduce bottle weight and therefore the costs of PET and the environmental footprint, while maintaining or improving bottle performance. With StarLite CSD, Sidel can help beverage producers achieve exactly this for their carbonated soft drinks production.”

The award-winning StarLite base design was originally developed for non-carbonated drinks where the bottles are under less pressure. The still drinks version was launched in 2013, and that design won the ‘Best Environmental Sustainability Initiative’ category at the 2013 Global Bottled Water Awards. Looking to the potential in CSD, Sidel's packaging experts took the principles adopted in the still drinks base, analysing different base designs to achieve the optimum performance and strength for CSD products. They then carried out numerous computer simulations followed by real-world physical tests. Now, after developing a CSD version, Sidel has launched it to a receptive marketplace.

The new design includes four key patents covering the slopes, ridges and truncations of the bottle base. The StarLite design is easier to blow than previous CSD bases because it can be done within a wider range of parameter settings on the blower, while still achieving the desired performance. As would be expected, it can be used on all Sidel blowing platforms for liquid packaging - including the Sidel Matrix system - at all existing output speeds. The new base is also easier to blow than previous CSD bases because it can be done within a wider range of parameter settings on the blower, whilst still achieving desired blowing performance.

The base can easily be incorporated into existing bottle designs by Sidel's packaging engineering team. It can also be retrofitted onto existing production lines and moulds, using Sidel's accompanying enhanced StarLite CSD mould bases and line conversion services. The accompanying Sidel StarLite CSD mould features an enhanced venting design for optimized cooling capabilities, and was developed in tandem to reach the desired high StarLite CSD bottle base performance levels.

For more information about what the innovative Sidel StarLite base can do for CSD and still drinks bottles please visit www.sidel.com/starlite.

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*Based on an SBO 20 Universal2 running at 6,000 hours of production per year, with an output of 2,000 bottles per hour with a PET cost of EUR 1,600 per ton.

**Based on an SBO 20 Universal2 Eco producing 2 litre bottles with 6,000 hours of production per year with a reduction in air pressure of 10 bars, without the use of an air recovery system at a cost of 0.08€/kwh.



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About Sidel

Sidel is the leading global provider of PET solutions for liquid packaging. We are committed to being the most innovative, responsive and reliable partner, providing sustainable solutions for the beverage industry.

Headquartered in Switzerland, we have production sites in 13 countries and 30,000 machines installed in more than 190 nations worldwide. With over 3,400 employees worldwide, we provide optimal PET packaging solutions for water, soft drinks, milk, sensitive products, edible oils and alcoholic beverages including beer.

We aim to create value for our customers by giving them A Better Match. This is the tailored solution that caters for their needs exactly. We do this by offering flexible and reliable production systems that are easily adaptable to market developments and future technology, supported by value-added services.

We are Sidel. We are **A Better Match**.

Find out more at www.sidel.com

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