

LIGHTWEIGHTING

points the way
to a leaner,
cleaner future

Whether working in collaboration with clients or through internal research and development, more companies are embracing lightweight designs as another part of their strategy to reduce carbon emissions.



As glassmakers continue their efforts toward decarbonisation through hybrid melting solutions, alternative fuels and the use of recycled cullet, glass packaging is seeking further reductions with lightweight products.

The benefits of these lighter designs are three-fold: reduced melting times to lower carbon in their creation, reduced shipping weight to cut down on fuel use and lower carbon during transport, while the lower weight also costs less for the delivery of products from their manufacturers.

Within the wines, beers and spirits markets, glass packaging has seen several new products enter the market recently, each offering a compelling combination of carbon reduction methods.

ARDAGH GLASS PACKAGING EUROPE: BORDEAUX, SCHLEGEL AND MORE

Launching in 2024 with two designs, Ardagh Glass Packaging-Europe introduced the Bordeaux and Schlegel lines. Both reduced the weight of their earlier lines from 410 grams to 360, and both can be made with up to 80 percent glass. This makes for a 12 percent reduction in carbon emissions.

Both Bordeaux and Schlegel 750 millilitre bottles are produced with a screw cap finish (BVS) and the Bordeaux range is also available with a cork mouth finish. Both bottle styles are available in flint, antique green and various standard green colours, with the addition of a royal blue option for the Schlegel range.

The new range is produced at AGP in Germersheim, Germany, adding new lightweight bottles to the standard European range, which already includes a lightweight 345 gram wine bottle produced in the UK.

AGP-Europe has more recently introduced an even lighter bottle designed for material reduction, structural performance and brand presentation. An ideal solution for still wines, the 300 gram, 750 millilitre bottle is made to perform on



high-speed filling lines and withstand supply chain handling while delivering a significant reduction in bottle weight.

VERALLIA: BORDELAISE AIR 300G AND BURGUNDY AIR 300G

Launching in 2023, the Bordelaise Air 300G was designed to preserve the aesthetic contours that define the classic Bordelaise bottle while creat-

ing one of the lightest bottles on the market. The Bordelaise Air 300G has been produced in Europe from 2023. It is available in the colours antique green, dead leaf and flint, and is distributed in six European countries, along with the Air jars and My Air product line.

Now Verallia is taking on another iconic design with the launch of Burgundy Air 300G. Marketed as “a model of disruptive eco-design,” this innovation stems from years of R&D expertise. Weighing just 300 grams compared to the European average of 450 grams (According to figures released by FEVE for the year 2023) with a 750 millilitre capacity, the Burgundy Air 300G reduces raw material use and CO2 emissions by 33 percent. Producing one million bottles saves 66 tonnes of CO2 (scopes 1 and 2), 279 MWh of energy, and 76 cubic metres of water. Depending on the glass colour, it can contain up to 86 percent recycled glass. The Bordelaise is available in colours antique green, green and flint.

The Verallia Air range is aligned with the Group’s Net Zero 2040 roadmap



to reduce CO2 emissions (scopes 1 and 2) by 90 percent and offset the remaining 10 percent by 2040, compared with 2019 levels.

VIDRALA: CAVA LITE, AND A 260 GRAM BOTTLE

While 300 gram bottles are meant for still wines, sparkling wines require stronger and heavier bottles to prevent their breaking in shipping and storage. Yet even within this market, there is room for reductions. As an example, Vidrala collaborated with Jaume Serra, a Spanish wine maker owned by García Carrión Group. The result is Cava Lite, a 750 gram bottle that reduces emissions by 6.25 percent per bottle compared to the previous 800 gram model. Vidrala claims that for every million bottles produced, the carbon emissions will be reduced by more than 15 tonnes. The launch of this bottle marks another step for Vidrala toward more lightweight options, and follows the



launches of BD Nova Lite in 2024 and BD Viva Lite in 2025. The Nova Lite weighs 360 grams, while the Viva Lite slims down further to 300 grams.

Perhaps the most intriguing of these upcoming options is a yet unnamed 260 gram bottle, first revealed at the Portuguese pavilion of Osaka Expo 2025. It's wider body is meant for a range of products, including spirits and oils as well as wines. Developed in collaboration with LiDA (Laboratory in Design and Arts at the Polytechnic of Leiria), it was designed with ultra-thin walls made with up to 80 percent

recycled glass.

ŞIŞECAM: THE WORLD'S LIGHTEST WHISKY BOTTLE

Working in collaboration with spirit producer Diageo, Şişecam developed a bottle for a limited edition whisky, Johnnie Walker Blue Label Ultra. The finished product is formed using glass blowing techniques to create a teardrop shape before the sides are pressed in to form a vaguely square shape. It's a remarkable technical feat resulting in a greatly reduced weight of 180 grams, making it the world's lightest whisky bottle. But that may not be for long, because Diageo has made the decision to open source the design, an invitation for other spirit makers to embrace the ultra-light package. Given its round bottom shape, the bottle is housed in a bamboo frame, which acts both to display the package as a work of art and to pour the rarified spirit contained within. The bamboo frame is housed in a special open walled box meant to protect the contents while capturing consumer interest. It makes a compelling point that lightweight doesn't have to mean the loss of bespoke designs for premium products.



VETROPACK: REZON

While most of the solutions offered for the wine market have utilized lighter designs and higher recycled cullet content, Vetropack's Rezon beer bottle aims to slash an even



higher amount of carbon by making their product reusable. Weighing around 30 percent lighter than traditional reusable packaging, these bottles are thermally strengthened to serve 20 percent more reuse cycles, leading to an extraordinary 75 percent in CO2 reduction.

Rezon bottles were first successfully tested on the market as part of a pilot project in Vorarlberg, Austria. Other users soon followed: a standard solution for the Austrian brewing industry was developed in collaboration with Brau Union, which has since made a significant contribution to achieving the Austrian reusable quota. Beverage brand Gösser was followed most recently by the Ried brewery, which is now switching its entire range to reusable bottles with the help of Vetropack's lightweight solution. The bottles are currently produced exclusively at Pöchlarn, Austria, which is being outfitted with an industrial-scale machine with significantly higher output in the second quarter of 2026.

LOOKING AHEAD

These are only a few examples of the continual research and collaboration leading to lighter glass packaging that doesn't compromise on product and consumer safety. As more lightweight options enter the market, they offer both tangible incentives and a gentle prod to competitors to join in on a trend that benefits them, their clients, and consumers.

Each new product offered in a lighter package is also a step closer to carbon neutrality when combined with new melting options and enhanced recycling practices, helping all of us, and the planet as well.