



20% larger container but keeping the same weight

# Turn up the volume

The quest for the perfect preform continues: with smart collaboration between PET packaging solutions provider Retal and one of its global beverage brand customers to create a bigger, lighter, easier-to-pour container that performs better in every way.

It started with a conversation between a Retal expert and one of their customers. The customer, a multinational beverage brand owner, wanted a larger alternative to its current 5l container without increasing its weight, and needed to further address the ever-important issue of sustainability in its packaging. With Retal's competence to create PET and rPET packaging solutions, this conversation started a chain reaction that included technically-advanced designers, the latest CAD software and true dedication to finding an answer.

Retal's technical director Alexandr Kachanov led the project. He explains how his team worked together to create a lighter, brighter preform. "This was a great opportunity to bring real value to our customer and show our preform design capabilities. Working together right from the start meant that every element of the project was focused on the solution they needed. The customer explained to us how their current 5l container needed to evolve; they wanted a PET container that was 20% larger but still kept the same weight of 64 g. Retal rose to the challenge!"

Retal senior designer Andzejus Buinovskis played an integral role in this project, with technical knowledge able to get the best out of the Dassault Systemes' Abaqus software plugin. Andzejus tells PETplanet, "We took the original container and reversed engineered it; analysing the bottle top load, different pouring situations, stretch ratios... we redefined the packaging completely, including the closure. I worked with the team to redesign the 48mm opening on the 5l container to make it just 38mm for the 6l preform prototype, which gives the consumer more pouring control and made it easier to open."

Andzejus notes how the analysis phase was crucial in understanding how the existing 5l preform worked and how such impressive changes could be made in the new 6l 'Karavan' container. He adds, "We looked deeply into how we could make improvements, with many bottle drawings, visualisations, images with bottle SBM (stretch blow moulding) and top load simulations."

"Our Retal reengineering team has done a great job with this project," adds Aleksandr "To have successfully increased the PET container volume without increasing its weight highlights the future possibilities of lightweighting and our on-going dedication to collaborating on commercially advantageous innovations."

With this light yet strong and easy to pour 6l container already in production, Retal is pleased to share its technical advancement to highlight how its latest PET packaging solution can support beverage brands in their ongoing focus on lighter preforms that meet the strictest performance and sustainability demands.

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