

Plastics Design Centre - Providing Mpact customers with innovative, sustainable packaging design

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The state-of-the-art Mpact Plastics Design Centre based at our Atlantis FMCG site in the Western Cape is geared to offer Mpact's customers innovative plastic packaging solutions from start to finish in as little as two weeks, expertly designing packaging that optimises environmental benefits, performance and product-material ratio whilst being fully compliant with sustainable design principles.

Recycling truly starts with packaging design

Importantly, our plastic packaging is manufactured to stringent health and safety standards and optimised in respect of the materials used in keeping with the circular economy, and the concept of “reduce, reuse, recycle”.

There is thus a strong emphasis on “designing for recycling” and producing products that lower the carbon footprint in the value chain using design principles such as wide necks to reduce product residue, nestable items, material identification symbols, minimal component use, additive- and colour-free resins, water-soluble inks and removeable labels – these all contribute to making our products recycling friendly.



Our lifecycle approach focuses on designing packaging for recycling whilst also taking factors such as customer design and filling requirements, brand positioning, supply chain requirements, costs and product preservation into account.

The use of rPET, rHDPE and rPP also assists in closing the loop and presents the opportunity to not only remove plastic from landfill but also strengthen the various recycling streams. With major developmental strides already made across all resin types, brands and converters have collectively proven that significant positive environmental changes can be made with minimal disruptions to the market and the end-users.

Expert knowledge at work

Our team is widely respected for their expert knowledge, including Extended Producer Responsibility (ERP) schemes. This allows us to create accurate content to engage with the industry at large and eliminate the legacy of misinformation about plastics, thereby promoting real “smarter, sustainable solutions” and keeping our customers at the top of their game.

Research and development key to performance

Our university affiliated, state-of-the-art Research & Development (R&D) Centre, based in Stellenbosch, ensures the latest packaging-related food safety standards and EPR regulations are adhered to. Through this valuable resource, we are able to engage and guide our customers through a journey of EPR compliance. Furthermore, our research team places a continuous focus on food safety standards, ensuring that all our packaging is safe for direct food contact.

Investment in leading-edge technology

While the Mpack Plastics Design Centre has been operational for many years, more recently it has been developed into a world-class design and technology centre, through significant investment in leading technologies such as digital 2D concept sketching, 3D modelling, photo-realistic rendering, 3D printing, and simulation software to conduct toplevel assessments and vacuum resistance, as well as to test fluid flow and heat and mass transfer, amongst others.



Following a detailed briefing process from the client, the centre then uses the latest computer-aided design and model-building technology to ensure that all parameters are met before the packaging arrives on the retail shelf. This involves continually evaluating the balance between the client's requirements and the need to reduce, reuse and recycle.

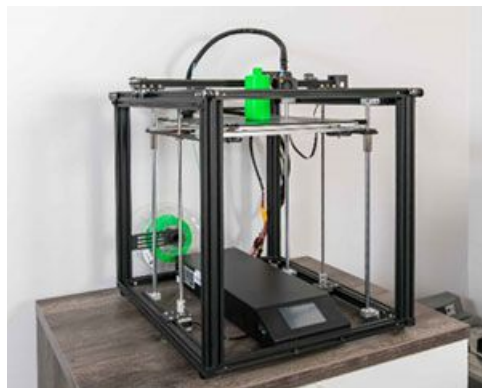
Using digital sketching and editing that allows for real-time, onscreen industrial designs, the team is able to meet tight deadlines whilst highlighting design features and benefits. By converting the digital sketches to 3D models, the team is also able to provide customers with photo-realistic renders and share

product specifications such as stacking configurations, form, weight and volume validation and accurate pre-investment product visuals to fast-track decision-making in bringing a new product to life.

Samples for marketing purposes can be decorated in a variety of options such as sleeving, painted or labelled, while up to 200 units can be prototyped for line trials by producing temporary moulds using the centre's 3D printing capability. A tailored sampling solution, with additional sampling options for limited line trials, is an extended capability also offered by the Mpack Design Centre.

Excellence all the way to the shelf

This technology affords the team the ability to offer customers very quick turnaround times with respect to design, development, R&D and delivering a realistic sample for decision-makers to "touch and feel" – quickening their decision-making, quality testing and ultimately lead time from development to shelf.



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Mpact



Mpact is the largest paper and plastics packaging and recycling business in Southern Africa. Our integrated business model is uniquely focused on closing the loop in plastic and paper packaging through recycling and beneficiation of recyclables.

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