

# Book of Entries

The New Zealand Plastics Industry

## 2016 Design Awards

23 September



# MESSAGE FROM THE PRESIDENT

Mark Field



On behalf of Plastics New Zealand, I would like to extend a very warm welcome to you all tonight as we celebrate the very best our industry has to offer.

The biennial Plastics New Zealand Design Awards have been running since 1952 and showcases, across a broad spectrum of businesses, the innovative and creative capabilities of this fantastic industry. Tonight you will see some great products, processes, materials and tooling and you will meet the very clever people responsible for their design.

There are many companies who have submitted award entries and I would like to acknowledge these companies as the time and effort required in submitting an entry is significant.

I would also like to thank our judges, under the chairmanship of Mark Hanlon. Judging the awards is a time consuming and challenging task requiring wide ranging knowledge and expertise.

Thank you to those companies who have provided category sponsorship for this event. Plastics New Zealand acknowledges your ongoing support.

Plastic is a fantastic medium and through innovation in design of products, materials and processes we enable our industry and our customers to grow and be successful. Tonight is about celebrating those people and companies at the forefront of our industry.

Good luck to all those who have entered the awards and congratulations to the winners. I hope you enjoy yourselves tonight and take the opportunity to network with each other.

A handwritten signature in black ink, appearing to read 'Mark Field'. The signature is stylized and fluid, with the first letters of the first and last names being prominent.

Mark Field - PNZ President

Category 1 ..... Food/Beverage

Client ..... Foodstuffs NZ Ltd

Designer ..... Alto Packaging Ltd

Tool Designer ..... Alto Packaging Ltd

Tool Manufacturer ..... Alto Packaging Ltd

Manufacturer ..... Alto Packaging Ltd

Foodstuffs (NZs largest supermarket chain) are actively promoting the sustainable use of packaging. In 2013 Foodstuffs approached packaging suppliers looking for a solution to eliminate EPS foam trays from their butcheries. Alto responded by introducing a range of PET trays featuring an array of cells in the base which captured the exudate and offered a tray with a rolled rim that could still be overwrapped in Foodstuffs instore butchery model. This is the first rigid, absorbing, recyclable overwrapped tray.



Category 7 ..... Environmental Products

Client ..... Nampak Plastics Ltd  
Designer..... Nampak Plastics Ltd  
Tool Designer ..... Nampak Plastics Ltd  
Tool Manufacturer ..... Nampak Plastics Ltd  
Manufacturer ..... Alto Packaging Ltd

In conjunction with Nampak Plastics Europe Ltd, Alto developed & designed a 2 Litre Infini Light Weight Milk Bottle for the NZ Market. The Infini Bottle uses 17% less HDPE per bottle when compared to a standard 2 Litre Milk Bottle in NZ.



Category 3 ..... Industrial  
Category 8i ...Injection Moulding - Conventional

Client .....Furnware Ltd  
Designer.....Furnware Ltd / Axiam Plastics Ltd  
Tool Designer .....Axiam Plastics Ltd/  
Hightech Mould China Ltd  
Tool Manufacturer .... Hightech Mould China Ltd  
Manufacturer .....Axiam Plastics Ltd  
Raw Material.....Clariant NZ Ltd

Furnware wanted a school chair added to their range that can be used in the classroom as well as halls and auditoriums where they need to be able to connect to form rows.

Conforming to NZ and Australian standards, be stackable and not require additional separate components to connect them. Another key element was reduced assembly cost and time.



Category 3 ..... Industrial  
Category 8i ... Injection Moulding - Conventional

Client ..... Pyro Limited  
Designer ..... Giles Russell  
Tool Designer ..... Giles Russell / Phil Neil  
Tool Manufacturer ..... Phil Neil  
  - PN Engineering Ltd  
Manufacturer ..... Axiam Plastics Ltd  
Raw Material ..... Chemiplas NZ Ltd

Disrupter barrel sets have been done before, using machined steel or machined from solid reinforced nylons or thermosets. The steel units are very heavy, expensive and are difficult to transport for a soldier. Machining the barrels from solid plastics or thermosets is also expensive and limits the selection of polymer.

Pyro Ltd & New Zealand Defence Force looked to design the first injection moulded disruptor barrel set to counter high weight and cost which has been a very successful process with Axiam Plastics.



Category 2 ..... Primary  
Category 8i ...Injection Moulding - Conventional

Client ..... Peach Teats Limited  
Designer..... Peach Teats Ltd/  
Axiam Plastics Ltd  
Tool Designer .....Balay Mould China Ltd/  
Axiam Plastics Ltd  
Tool Manufacturer ..... Balay Mould China Ltd  
Manufacturer .....Axiam Plastics Ltd  
Raw Material..... Interplas Agencies Ltd/  
Clariant NZ Ltd

Most large Calf feeders in the market worldwide, are Rotational moulded, which are heavy, expensive, inaccurate and also simply “ugly” compared to what can be achieved if Injection moulded.

This provided an opportunity to those willing to be innovative and invest time and capital for development of an Injection moulded version.

One of many things that had also to be considered in doing so was the “Perception” in the Industry of part strength with end users being use to a heavy industrial looking product. The new Light weight product needed to not only be very strong



but not LOOK weak and flimsy. This feeder can be repeatedly dropped on concrete with a full 25 litre load without breaking and able to be carried full, without flexing due to the large bead used for strength as well as a handle.

Category 2 ..... Primary

Client ..... Bartley Group Ltd

Designer..... Bartley Group Ltd/  
Axiam Plastics Ltd

Tool Designer ..... Axiam Plastics Ltd

Tool Manufacturer ..... Axiam Plastics Ltd

Manufacturer ..... Axiam Plastics Ltd

Raw Material.....Clariant NZ Ltd

Most current Hive platforms are constructed from wood and wire grid fixed direct to wooden pallets that have a very limited life and a huge cost to the industry annually, while the new “Hive Plus” platform is a development driven by the need to reduce cost and time in an industry that is in a huge growth phase in NZ as well as abroad.

Winner of the 2016 “Roy Patterson” Innovators award at the 2016 Apiculture Conference.





Category 3 ..... Industrial

Client .....Fastmount Ltd

Designer.....Blender Design Ltd

Manufacturer ..... Lane Plastics Ltd

The new Textile clip developed by Blender and Fastmount has been specifically designed to replace ancient fastening systems on superyacht furnishings. The new clip system is a game changer in the marine industry, using smart and simple design combined with engineered plastics to securely hold squabs in place while maintaining easy release and re-attachment. The product is straightforward to install by upholsterers, easy and safe to use by the crew, and discreet for the owner.



# Blender Design Ltd

# Integ Ar-ray Series Monitor Arms

Category 5 .....Consumer

Client ..... Integ International Ltd

Designer.....Blender Design Ltd

Manufacturer ..... Integ International Ltd

The Ar-ray, meets the market demand for a lower cost monitor arm solution, but stands out from its competitors thanks to strong aesthetic impact. We took advantage of clever use of materials, interesting surface textures, contrasts, colours, and we developed a patented all plastic height adjustment mechanism to really set the Ar-ray apart.

With a simple yet robust design, solid yet cost effective components, and elegant simplicity, the Ar-ray is high quality innovation – without the high price tag.



# Blender Design Ltd

## Genus Lifestyle Spa Lid

Category 5 .....Consumer  
Category 16 ..... Rotational Moulding

Client .....AR Moulding Ltd  
Designer.....Blender Design Ltd  
Manufacturer .....AR Moulding Ltd

Spa pool lids haven't changed for 20 years, until now...

The Genus Lifestyle Spa Cover is the first of its kind. Made from Rotational Moulded and foam filled Polyethylene it is built to last, easy to handle, thermally efficient and it looks fantastic! Incorporating many unique and innovative design features and manufacturing techniques the Genus Lifestyle Spa Cover is set to change Spas for good!



Category 1 ..... Food/Beverage

Client ..... Bombay Pet Foods Ltd  
Designer..... QDesign Enterprises Pty Ltd  
Tool Designer..... Emold Engineering Ltd  
Tool Manufacturer ..... Emold Engineering Ltd  
Manufacturer ..... Bonson Industrial Ltd  
Raw Material ..... Clariant NZ Ltd

Jimbo's pet food packs are all-round outstanding examples of well-considered FMCG packaging. Increased efficiency, improved supply chain, durable, reduced waste, increased shelf appeal, consumer safety, post-use design and improved accessibility: these are among its successes, resulting in high praise from the brand owner, manufacturer, and consumers.

A common footprint across the two packs creates significant pallet efficiencies. Design and materials enhance packaging durability, and improved aesthetics boost shelf appeal. An easy-to-function lid and well-designed tamper-evident feature provide improved accessibility. Downloadable label templates provide a second life, helping to reduce packaging waste.



Category 4 ..... Building

Client ..... Dynex Extrusions Ltd  
Designer ..... Dynex Extrusions Ltd  
Tool Designer ..... Dynex Extrusions Ltd  
Tool Manufacturer ..... Dynex Extrusions Ltd  
Manufacturer ..... Dynex Extrusions Ltd

DynaFlash™ Universal Back Flashing, by DynexBuild, is an innovative new flashing product that pushes the boundaries in its market space, taking a commodity building product and turning it into something the industry talks about. With the ability to be used in multiple applications and supplied in a handy 25m dispensing carton, it eliminates flashing joints and reduces waste on the building site. DynaFlash™ is an example of simple design that improves a builder's experience.



Category 4 ..... Building  
Category 11 ..... Extrusion

Client .....Rockote Systems  
Tool Designer..... EPL  
Tool Manufacturer..... EPL  
Manufacturer ..... EPL  
Raw Material..... SCG

EPL's customer required a complex product for their plaster system that provided a seal between the window frame and the cladding across a range of applications.

The co-extrusion die consists of seven sections all requiring balanced material flow. The punch and tape application tooling needed to match the output rate of the extrusion tool across a range of line speeds.

The manufacturing process combined multiple sub-process elements in a single pass to ensure an efficient and cost effective outcome.



Category 11 ..... Extrusion

Client ..... EPL

Designer..... EPL

Tool Designer..... EPL

Tool Manufacturer..... EPL

Manufacturer ..... EPL

The foam quad co-extruded foam seal has been developed to provide a superior alternative for commoditized woolpile weatherseal product installed in aluminium window glazing joinery, where sealing is required for sliding doors and windows applications.

The tooling combines four different materials from four individual extruders through a single multi-path, multi-plate die.

The final product allows for longer life, higher window and door pressure ratings and no issues with mould or rot.



Category 11 ..... Extrusion

Client ..... EPL

Designer.....Alan Bower

Tool Designer.....Alan Bower

Tool Manufacturer.....Alan Bower

Manufacturer ..... EPL

Raw Material..... Kluber Lubrication

Surface treatment of silicone rubber extruded profiles with a suitable slip coat is required to reduce the material's inherently 'tacky' surface when it is used in sliding applications.

The slip coat is applied on line by an ultra-low pressure precision spray system, onto a surface pre-treated by plasma arc.

The system requires minimal training and regularly runs blockage free for up to eight hours.



polymer **innovation** created every day



Category 11 ..... Extrusion

Client ..... EPL

Designer ..... EPL

Manufacturer ..... EPL

Raw Material ..... SCG

The Rigid Corner Profile extrusion is an innovative building product offering a 90-degree square corner section designed to batten thickness. This is achieved via hollow sections which allow fixings to be driven through it.

The tooling comprises 6 plate multi-cavity sectional design die to extrude a sectioned thin walled profile. Dry calibrators are used before the profile enters a wet calibration vacuum water tank. The profile is printed on-line and cut to length at 2.7M.



Category 2 ..... Primary  
Category 8i ... Injection Moulding - Conventional

Client ..... ES Plastics Ltd  
Designer ..... ES Plastics Ltd  
Tool Designer ..... ES Plastics Ltd  
Tool Manufacturer ..... ES Plastics Ltd  
Manufacturer ..... ES Plastics Ltd

ES Plastics has developed, in conjunction with New Zealand's fishing industry, the next generation of Commercial Fish Case to deliver their catch in pristine condition. The structural top edge aids in nesting, and features drainage channels to direct blood slurry to the outside of each crate for a fresher catch.



Category 3 ..... Industrial  
Category 9 ..... Blowmoulding

Client .....ES Plastics Ltd  
Designer.....ES Plastics Ltd  
Tool Designer.....ES Plastics Ltd  
Tool Manufacturer .....ES Plastics Ltd  
Manufacturer .....ES Plastics Ltd

The 10L and 20L Swing Handle Jerry Can Range includes a Customised rubber overmolded handle for market differentiation for high value liquid products. The swing handle gives greater pour control.

They incorporate a 70mm Tamper Evident Cap, and wadded 38mm Tamper Evident Cap, and a 3/4" BSP Bung in line with the Visi-Strip enabling users to visually check the level of contents.



Category 5 .....Consumer Products  
Category 8i ...Injection Moulding - Conventional

Client .....ES Plastics Ltd  
Designer.....ES Plastics Ltd  
Tool Designer.....ES Plastics Ltd  
Manufacturer .....ES Plastics Ltd

The Oasis Pot takes owning potted plants to a whole new level. Featuring a unique capillary action, the Oasis pot keeps plants watered for up to 4 months. The attractive and robust design, featuring the water level indicator, looks great in any home or office.



Category 5 ..... Consumer Products  
Category 9 ..... Blowmoulding

Client ..... ES Plastics Ltd  
Designer ..... ES Plastics Ltd  
Tool Designer ..... ES Plastics Ltd  
Tool Manufacturer ..... ES Plastics Ltd  
Manufacturer ..... ES Plastics Ltd

Whether it's gardening, picking fruit, fishing or working, the Sitalong will become your favourite multi-purpose utility that can be used as watering can, storage bucket or seat.

The Sitalong is ergonomically designed with a robust integral carry handle and is sound enough to enable a 110kg person to sit on it.



Category 2 ..... Primary  
Category 8i ... Injection Moulding - Conventional  
Category 19 ..... Export

Client ..... Gallagher Group Ltd  
Designer..... Gallagher Design Team/  
Professor Tony Parker  
Tool Designer..... Gallagher Tool and Die  
Tool Manufacturer ..... Gallagher Tool and Die

The S20 is a self-contained solar energizer for small permanent and portable electric fencing. With its compact and portable, yet tough, water-resistant casing and 360° mounting options, the S20 sets the standard in convenience for strip grazing, animal control, pet containment, garden beehive or tree protection.

The S20 exceeds our customers' expectations in portability, ease of use features and robust requirements. This robust and highly portable unit makes a great alternative to battery-powered systems.



Category 1 ..... Food/Beverage

Client ..... SHOTT Beverages Ltd

Designer ..... Bill Mancer Design/  
Linkplas Ltd/SHOTT Beverages Ltd

Manufacturer ..... Linkplas Ltd

When SHOTT Beverages wanted to replace an existing glass package with unbreakable PET Linkplas was their first choice.

The design brief was the bottle must be unique and compliment a quality coffee machine in a high end kitchen setting. Incorporating the metal closure also brings the design to life.

Ultimately the proof is in the results. David Shearer, CEO SHOTT Beverages: "In a grocery environment 28% growth in the first year through solely a packaging change is like the holy grail especially when those packaging changes have also led to lower costs!"



# Methven Limited

## Methven Aurajet A10 Twin Shower System

Category 5 ..... Consumer Products  
Category 8i ... Injection Moulding - Conventional  
Category 19 ..... Export  
Category 20 ..... Toolmaking

Client ..... Methven Limited  
Designer ..... Methven Limited  
Tool Designer ..... Methven Limited  
Tool Manufacturer ..... Methven Limited/Various  
Manufacturer ..... Methven Limited/Various

The Aurajet™ Aio shower range is our most advanced, most invigorating shower experience to date. Its breakthrough spray technology and halo shape are intrinsically linked in an enduring union of form and function. Aio's elegant, minimalist composition creates a unique aesthetic that is sophisticated, beautiful and timeless. The project went through 18 months of concept development followed by a formal design and development process that lasted 2 years culminating in a simultaneous global launch.





# Millennium Plastics Ltd

# Inverse Conditioning System

Category 6 ..... Personal Care  
Category 20 ..... Toolmaking

Client .....Roholm Ltd  
Designer.....Locus Research Ltd  
Tool Designer ..... Millennium Plastics Ltd/  
Teknic Deezines/Robert Coleman  
Tool Manufacturer ..... Millennium Plastics Ltd/  
Teknic Deezines/Robert Coleman  
Manufacturer ..... Millennium Plastics Ltd  
Raw Material.....Clariant NZ Ltd

Using sub-zero temperatures, Inverse can help restore the hairs natural lustre and repairs hair at a micro level. The world's first hair conditioning system using the power of ice, Inverse is produced from a careful selection of plastic and aluminium combined with a uniquely formulated solution encapsulated within the product allowing it to maintain the low temperatures required for the system to function.

The system uses no electrical power or heat, so, unlike heat or chemical treatments, the more Inverse is used, the better the results.



Category 5 .....Consumer Products

Client ..... Parking Sense Ltd  
Designer..... Parking Sense Ltd  
Tool Designer ..... Millennium Plastics Ltd/  
Edgeworth 2000/ Camtec Limited  
Tool Manufacturer ..... Millennium Plastics Ltd/  
Edgeworth 2000/ Camtec Limited  
Manufacturer ..... Millennium Plastics Ltd  
Raw Material.....Clariant NZ Ltd

Engineered to provide simple effective guidance which maximises car park occupancy, EasyGuide Eliminates congestion and improves traffic flow. Combined with “smart” back-end technology, the system scans its local network several times a minute, reading each indicator’s status. This includes whether the bay is occupied and whether the vehicle has overstayed a time limit. This data is then ready by a master data processor which makes the data obtained readily available in various forms suitable for the end user’s requirements.



# Millennium Plastics Ltd

## MPL Environment & Energy Achievement

Category 18 ..... Environmental & Energy Achievement

Client ..... Millennium Plastics Ltd  
Manufacturer ..... Millennium Plastics Ltd

In 2000 Millennium Plastics (MPL) was established with equipment and services being matched to a known product workload utilising state of the art technologies at the time.

The PNZ Best Practice Energy Program reviewed our performance in 2009, a raised awareness of energy and waste reduction opportunities resulted.

The pursuit of technologies which provide process gains with energy reduction and targeted testing equipment and training lifting our in-house capability continues.

Environmental impact is a consideration through both product and tooling design. Rapid prototyping, part analysis, and “smart” manufacturing processes minimise waste.



Category 5 ..... Consumer Products  
Category 8i ... Injection Moulding - Conventional  
Category 20 ..... Toolmaking

Client ..... Aquastrength Ltd  
Designer ..... Simon Eccleston  
- RPM International Tool & Die Ltd  
Tool Designer ..... Simon Eccleston  
- RPM International Tool & Die Ltd  
Tool Manufacturer ..... RPM International Tool  
& Die Ltd

Aqua Strength had a vision to revolutionise the Aquatic fitness industry. They came to see RPM International Tool & Die to transform their vision into a reality. From concept to finished product RPM was there with them every step of the way. The result is a world class fitness package consisting of the Barbell, Dumbbell and leg fins. These products challenge the status quo and offer a sleek and stylish solution to your aquatic fitness needs.



# Talbot Technologies Ltd

## International 9870 Truck Grille

Category 3 ..... Industrial  
Category 13 ..... Thermoforming

Client ..... Intertruck Distributors (NZ) Ltd  
Manufacturer ..... Talbot Technologies Ltd

The International 9870 grille is manufactured for Intertruck Agencies in Tauranga.

It is vacuum formed from multi-laminar PC/ABS sheet system, on an oil heated, cast and machined, aluminium mould. It is then 5-axis routed on a wooden vacuum jig.

The grilles have not only provided greatly reduced cost and weight, but have also proven more durable than the stainless steel grilles they replaced. The design look was developed from the most popular Intertruck staff selection, and has been a hit with new truck buyers.



Category 5 .....Consumer Products  
Category 8ii....Injection Moulding - Co-Moulded

Client ..... Mimark  
Designer.....Procreate Design Ltd  
Manufacturer ..... Talbot Technologies Ltd

A young mother's concern for her two sons who suffer from a mild form of haemophilia, and her own experience of being a "Jane Doe" after a serious bicycle accident left her unconscious and unknown for several days, inspired Tracy Austin to conceive of a watch that doubles as an identification device for children that can be worn everywhere – including to schools.

Mimark features a unique QR code and text number for its user, that can be easily revealed when needed.



Category 5 .....Consumer Products  
Category 8i ...Injection Moulding - Conventional

Client .....Mclvor Mobberley  
Manufacturer ..... Talbot Technologies Ltd

One day after scratching his new bike while hosing it after a ride, Nigel Mobberley went into the garage and started to design a stand to use for cleaning, repairing and storing his bike.

With friend Chris Mclvor, the Mclvor/Mobberley partnership was established, and engaged Talbot Technologies to develop the design for production, design and make tooling, and produce the product.

The stand accommodates a wide range of mountain bike tyre sizes and can be connected to a multiple bike stand or fixed to the wall or floor.



# Talbot Technologies Ltd

# AuCom EMX 4i High Voltage Motor Controller

Category 3 ..... Industrial  
Category 8i ... Injection Moulding - Conventional  
Category 20 ..... Toolmaking

Client ..... AuCom Motor Control Specialists  
Manufacturer ..... Talbot Technologies Ltd

AuCom Electronics' new range of starters for large electric motors (up to 300kW) are smaller, and smarter than their predecessors and competitors, allowing for smaller control cabinets, and smaller control rooms. They are thought to be the largest motor controllers in the world that feature plastic housings and support frames. They can support 100kgs or more of cables at elevated temperatures, which made materials selection, testing, and processing difficult and demanding.





Category 1 ..... Food/Beverage  
Category 8i ... Injection Moulding - Conventional

Client ..... Lifeonics Ltd  
Manufacturer ..... Talbot Technologies Ltd

SMOD is an optical device that revolutionises fermentation process monitoring. Dropped into a fermentation flask, it performs regular analysis of fluid density, and wirelessly transmits results to a laboratory PC, or to phones or tablets. It represents a paradigm shift in fermentation control and analysis. When it has done its job, it is returned to a base station where it is inductively recharged.



# Talbot Technologies Ltd

## Aircraft Seating

Category 3 ..... Industrial  
Category 8i ... Injection Moulding - Conventional  
Category 19 ..... Export

Client ..... Zodiac Seats California  
Tool Manufacturer ..... E G Whiter Ltd  
- Neil Goodmon  
Manufacturer ..... Talbot Technologies Ltd

With a changing market, Talbot Technologies selected a new specialist export niche in the Aerospace market. It requires high end quality systems, combined with high technology materials and processes.

Talbot has developed plastics technology partnerships with a number of international aerospace customers, and this has led to contracts supplying aircraft seating parts.

Zodiac Aerospace, a “giant” of aircraft seating, required two sizes of a new head restraint, in a very short timeframe. This involved delivering an aluminium mould in just 3.5 weeks so parts were available for certification testing, and following that with final moulds and parts.



Category 2 ..... Primary

Client ..... Tru-Test Ltd  
Designer..... Ashif Memon  
Tool Designer..... Andrew Simpson  
Tool Manufacturer ..... Masbros Engineering Ltd  
Manufacturer ..... Tru Test Ltd

Tru-Test have partnered with leading power stapler manufacturer STOCKade, to bring speed and precision to the installation of permanent electric fences. The system has been designed, developed and manufactured in New Zealand, the insulator is injection moulded by Tru-Test in Auckland. The Insulator, along with other system components were recently launched at the National Agricultural Fielddays at Mystery Creek, June 2016.



## Event Category Sponsors



### Plastics New Zealand

P O Box 76 378  
Manukau City  
New Zealand

Phone: 64 9 255 5662  
Fax: 64 9 255 5663  
info@plastics.org.nz  
www.plastics.org.nz