

# Book of Entries

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## MESSAGE FROM THE PRESIDENT

### Ray Pryor

In welcoming you all to the 2010 PNZ National Biennial Design Awards I invite you to treat this event not just as a celebration of the finalist entries in the Design Awards but also of the success of our industry in facing up to the challenges of the past two years.

For the 2010 Design Awards we had 37 product entries covering 66 category entries – an increase in the entries for the 2008 – the quality of entries being recognition that specialist design, creativity and innovation is present within the DNA of our industry.

Success in business these days does not come about by accident, it is more than ever dependent on design, applied not just to the development of new products, but also being applied to the business itself. Clear goals, carefully developed strategy, and a business sculpted into a form which is able to cost effectively deliver on those goals is the result of a well designed business.

Some say Kiwi Ingenuity is a myth, I strongly disagree. The success of the nation being dependent on No.8 wire and clever ideas has definitely changed, however the new generation delivering on Kiwi Ingenuity has much more powerful tools at their disposal eg: 3D CAD, 5 axis machining centres, rapid prototyping, laser metal fusion, to name a few.

International competitiveness will only be retained by continued investment in technologies, development of processes and the expansion of our skill base through a commitment to training of our employees, ensuring NZ retains the advantages of being an “early adopter” nation.

PNZ has set itself a goal on behalf of our membership, the goal still remains - \$4 Billion sales involving 12,000 employees by 2015. The challenges are increasing as the businesses we support have reacted to external pressures within the global business environment.

The challenge we face is to ensure we are able to offer training in design, tool-making, process engineering, polymer choice and manufacturing at the levels required to match the technologies available.

The involvement of our member companies in DDSP courses, PaMPITO Industry Training initiatives, ITAT and CPIT training courses and visiting experts, will put those companies in a stronger position to be able to deliver world class products from state of the art facilities.

Inventive thinking can result in a need for industry research and development capabilities to be easily accessed. The consolidation of the PCOE facility over the last two years means we are now able to deliver on this and keep smart thinking within NZ.

A recent success is the development of tear resistant blown Flexible Film from PLA, a joint

project between Clariant, Convex and PCOE. A result which has truly impressed Natureworks (USA) who had given up on this application of their Bio-Base Polymer.

The team at PCOE is available to be involved in “Designing” the next client specific development program, be it a new or modified polymer, product, or process.

PNZ has a very enthusiastic Environmental Committee which is dedicated to addressing issues related to the environment and product sustainability, we participate in the Product Stewardship Scheme, and continue to support the Best Practice Energy Program in conjunction with EECA.

Sustainability has become more than a buzz word and is now a consideration within the design process for new products, involving cradle to grave impact on the environment, recyclability, and/or re-use.

Looking about tonight’s gathering, I see representatives from every facet of our industry and would like to take this opportunity to thank the following:

#### **Our Clients:**

Through our clients we receive the opportunity to develop cost effective, world class solutions to the design challenges we face, their success proves we can and do attain this level.

#### **The Applicants:**

Design is behind the creation of new products, your efforts reveal innovative thought process, a desire to succeed, and the required energy to achieve these successes. Without your willingness to participate we would not be here tonight.

I wish you all good luck with your entries and market success with those products.

#### **The Judges:**

Your dedication to our industry is reflected in your willingness to freely deliver impartial, expert judging of the submissions presented, confirming the quality and status of these Awards.

#### **The Sponsors:**

Without the sponsor companies involved we would not be able to present this event at the level which truly reflects the class and recognition it deserves.

#### **Plastics New Zealand:**

To Robin, Kelly, and Lorna, the team who have been hands-on in the background for many months, thank you for your efforts in making this event an enjoyable success.

I sincerely wish all present enjoy tonight’s Awards, and on behalf of Plastics New Zealand, I look forward to your continuing support and participation in ongoing and future events within our industry.

# Alto Packaging Ltd

## Top Seal Barrier Foam Tray

Product Category 1 .....Food/Beverage  
Process Category 13.....Thermoforming

Client ..... Progressive Enterprises Ltd  
Designer.....Alto Packaging Ltd  
Tool Designer.....Alto Tool Room  
Tool Maker .....Alto Tool Room  
Manufacturer .....Alto Packaging Ltd

The Top Seal Barrier Foam Tray was developed specifically for Progressive Enterprises Ltd providing a unique MAP (Modified Atmosphere Packaging) application in a foam format primarily for Beef products. This unique tray has extended shelf life, enhanced shelf presentation and provided ease of handling through the Meat Processing Plant. The design also ensures a 45% material wastage reduction compared with other trays of the same size. This is the first NZ manufactured foam barrier tray.



# Alto Packaging Ltd

## Fresh 'n Fruity 1 kg

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

Client.....Fonterra Brands NZ Ltd  
Designer.....Alto Packaging Ltd  
Tool Designer..... European Tooling  
Tool Maker ..... European Tooling  
Manufacturer .....Alto Packaging Ltd

The Fresh 'n Fruity 1 kg Yoghurt Tub, affectionately known as 'CURVY', was developed as a result of Fonterra's need to launch a new 1 kg pack into the New Zealand market, and Alto Food Packaging's research and development into foil-less tamper evident pack systems. The collaboration between Alto's design team and Fonterra's marketing and management teams has resulted in a highly attractive and functional 1 kg Yoghurt package which has been very well accepted by the New Zealand consumer.

The new package has numerous advantages both from a production and marketing point of view. The tamper evident pack is foil-less which reduces cost and cuts down on filling and production complexity. The pack is fully resealable to reduce product spoilage after opening. In Mould Labelling (IML) technology allows for high quality four colour process offset printed labelling and eliminates any extra printing processes. The pack is a mono material product made entirely from Polypropylene. The contoured container design provides better and more comfortable handling and is suitable for direct "on table" use. Recyclability is improved because the container may be reused as a storage container in the home for dry and wet goods due to better resealability of



## Alto Packaging Ltd

### Yoplait 1Kg Yoghurt Tub

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

Client.....National Foods NZ Ltd  
Designer.....Alto Packaging Ltd  
Tool Designer..... European Tooling  
Tool Maker ..... European Tooling  
Manufacturer .....Alto Packaging Ltd

The Yoplait 1 Kg Yoghurt Tub, was developed as a result of National Food’s need to launch a new 1 kg Yoghurt package into the New Zealand market and Alto Food Packaging’s research and development into foil-less tamper evident pack systems. The collaboration between Alto’s Technical and design teams and National Food’s marketing and management teams has resulted in a new highly attractive and functional 1 kg Yoghurt package which has been very well accepted by the New Zealand consumer.

The new package has numerous advantages both from a production and marketing point of view. The tamper evident pack is foil-less which reduces cost and cuts down on filling and production complexity. The pack is fully resealable to reduce product spoilage after opening. In Mould Labelling (IML) technology allows for high quality four colour process offset printed labelling. This eliminates any extra printing processes and inks. The pack is a mono material product made entirely from Polypropylene. The contoured container design provides better and more comfortable handling and is suitable for direct “on table” use. Recyclability is improved because the container may be reused as a storage container in the home for dry and wet goods due to better resealability of the package, as well as other ‘shed’ uses.



## Axiam Plastics Ltd

### Back Skin Development for “Be” Chair

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

Client.....Formway Design Studio  
Designer..... Formway Design  
Tool Designer..... Axiam/Formway Design/  
Knoll/RPM Engineering  
Tool Maker ..... RPM Engineering  
Manufacturer ..... Axiam Plastics Ltd

The back skin is one of the key parts of the innovative “Be” chair designed by Formway Design. Success of the back skin development rested on Axiam having the knowledge, confidence and willingness to work with Formway Design to make it a reality.

The moulded skin needed to be perfect to achieve the desired result. Any weakness in the part from weld lines or air traps would result in failure, and with 1925 small cores of different shapes and size to flow round and a part length of 670mm it is no simple exercise.

One of the most innovative developments came from research that showed that excessive stretching of the moulded part changed the physical properties of the polymer creating an extremely comfortable, strong, fabric like feel to the back skin.



## Axiam Plastics Ltd

### Recline Transom Development for “Be” Chair

Category 3 .....Industrial  
Category 8ii..... Injection Moulding

Client .....Formway Design Studio  
Designer..... Formway Design  
Tool Designer ..... Axiam Plastics Ltd  
Tool Maker ..... Axiam Plastics Ltd  
Manufacturer ..... Axiam Plastics Ltd

The Recline Transom design utilizes material technologies and design to maximum effect. The single co-moulded part when compared to Formway’s existing high end task chair (‘LIFE’) replaces 5 die cast aluminium parts plus various pivot pins, bushes, retaining clips etc, a total of 21 separate parts. Hytrel over-moulded to a heavy PBT substrate allows flexing movement through controlled deformation to provide enhanced user comfort. Fewer moving parts means less assembly tolerance issues, less opportunity for squeaks or other noise during use and lower potential warrantee costs.



## Axiam Plastics Ltd

### Side Storage Unit Assembly

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

Client ..... Furnware Ltd  
Tool Designer ..... Axiam Plastics Ltd  
Manufacturer ..... Axiam Plastics Ltd

The Side storage system was designed by Furnware Ltd and Burroughs Pilcher Design with Students and teachers having considerable input. Taking the design and putting it in to production provided a few new challenges. While the assembly needed to look good it also needed to carry heavy loads of books and be able to handle the abuse typically found in some schools.

The main “Book Bin” went through 8 revisions before it went to tooling, though the Bin part is not huge, due to the length of draw and the mass of steel needed to cope with side load in mold pressure, the tooling for it is substantial weighing in at over 2.5 MT and requiring a 460 t machine to fit the tool.



# Axiam Plastics Ltd

## Bodyfurn Cushion

Category 3 .....Industrial  
Category 17 .....Foam

Client ..... Furnware Ltd  
Tool Designer ..... Axiam Plastics Ltd  
Tool Maker ..... Axiam Plastics Ltd  
Manufacturer ..... Axiam Plastics Ltd

In an effort to add value to an already successful product the covered seat cushion was developed. Accurately controlling the dimensions of all parts were critical. Once proven, the large base moulding tolerance straight after de-Mould was set at 359.1 +/- 0.2mm and a weight of 725gms +/- 3gms. Consistently achieved, we then set about working with Furnware to come up with a design that was practical, cosmetically pleasing and fitted well with the existing styling of the chair. The foam is a non-halogenated flame retardant containing no Fyrol or TCCP. An environmentally friendly system developed with Axiam by ERA Polymers.



# Blow Moulders Ltd

## Wire Rope Socket

Category 3 .....Industrial  
Category 9 ..... Blowmoulding  
Category 19 ..... Export

Client .....Armorflex International Ltd  
Designer .....Blow Moulders Ltd  
Tool Maker .....Blow Moulders Ltd  
Manufacturer .....Blow Moulders Ltd

Blow Moulders Limited is proud to submit the "Wire Rope Socket" that is used in conjunction with ARMORWIRE CABLE BARRIER.

Our customer, Armorflex International approached us with a concept to incorporate into their road barrier system. The alternative method of embedding a steel post in a concrete footing is slower and more expensive, particularly in regard to replacing/repairing a post that has suffered damage from vehicle impact.

This is the first Cable Barrier system in NZ, to be locally designed, manufactured, tested and approved by authorities and certified to overseas standards.



# ComSpec

## Milk Bottle Wash Plant

Category 18 ..... Environmental Achievement

Client ..... Compounding Specialists Ltd  
Designer ..... Compounding Specialists Ltd  
Manufacturer . Compounding Specialists Ltd

In May 2009, Comspec installed the first HDPE Milk Bottle Wash Plant in NZ. It was designed and purpose built for this market, and can process 100,000 milk bottles per day, producing a high specification HDPE, which manufacturers can use to replace virgin resin. The process is chemical free and all water is recycled in a closed loop system. The project is an excellent example of product stewardship bringing together milk producers, councils and recyclers to provide a local solution.



# Convex Plastics Ltd

## Renewable Coffee Bag

Category 7 ..... Environmental

Client ..... Convex Plastics Ltd  
Designer ..... Convex Plastics Ltd  
Manufacturer ..... Convex Plastics Ltd

Convex Plastics has developed the world's first renewable and compostable packaging for both hot and cold roasted coffee. Made from an innovative combination of materials derived from wood pulp and corn – the new packaging successfully meets the increasing demand for high barrier properties and functionality in one renewable package. An optional positive pressure release vent built into each pack also enables hot roasted coffee beans and grinds to release gas carbon dioxide.



# EveredgeIP Ltd

## CrushPak

Category 1 .....Food & Beverages

Category 19 ..... Export

Client .....EveredgeIP Ltd

Designer.....EveredgeIP Ltd

CrushPak™ is a packaging solution developed by EverEdgeIP. CrushPak™ incorporates a unique concertina-like design which the consumer squeezes to access the contents - easily, without mess or a spoon. The design allows the top flange to be used as a platform for easy consumption, and concertina for squeezability, significant material reduction and increased strength. It is scalable to suit multiple applications and can be specifically adapted for use with any viscous food product.



# Felton Industries Ltd

## Versadisc Shower Mixer

Category 5 ..... Consumer Products

Client.....Felton Industries Ltd

Designer..... Trevan Design/

CPC Engineering & Design

Manufacturer .....Felton Industries Ltd

Versadisc is the first shower mixer on the NZ market to be fully accessible front-of-wall for maintenance and upgrades, allowing it to evolve with its user's life stages and anticipate their future needs. Adapting to different pressures, cleaning filters and upgrading to a thermostatic cartridge is achieved simply by removing its handle set – reducing labour time from hours to just 10 minutes maximum, and potentially saving homeowners up to thousands of dollars.



# Gallagher Group Ltd

## Smartfence T4100

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

Client ..... Gallagher Group Ltd  
Toolmaker ..... Sunplas Engineering Ltd  
Manufacturer ..... Gallagher Group Ltd

The SmartFence redefines the global portable electric fencing category. Easy to use, transport and store, the innovative SmartFence offers significant cost and productivity benefits for professional farmers. At the same time these characteristics virtually eliminate the need for professional fencing expertise, also making it ideal for lifestylers, being easy to operate and ergonomically convenient to carry safely – especially in hilly terrain.

The resulting product is unexpectedly simple, achieved through clever design and use of injection moulded components.



# Gallagher Group Ltd

## Smart TSi

Category 2 ..... Primary  
Category 8ii..... Injection Moulding

Client ..... Gallagher Group Ltd  
Designer ..... Gallagher Group Ltd /  
Tony Parker, Industrial Design,  
Massey University  
Manufacturer ..... Gallagher Group Ltd

The SmartTSi is a revolutionary new animal management system from Gallagher. The product combines a livestock weigh scale, a Windows CE computing platform, and a livestock management software programme into a single integrated product. The SmartTSi enables farmers without computing skills to easily record and analyse livestock data, through innovative software design leveraging a full colour touch screen. Clever design, use of co-moulding and careful material selection has resulted in a highly rugged product for tough farm environments.



## LinkPlas Limited

### Sistema Twist ‘n’ Pop Wave Bottle

Category 5 ..... Consumer Products  
Category 9 ..... Blow Moulding

Client ..... Sistema  
Designer ..... Sistema Design Team

#### Bottle:

Tool Designer ..... LinkPlas Limited  
Specialised Components Ltd  
Toolmaker .. Specialised Components Limited  
Manufacturer ..... LinkPlas Limited  
Raw Material Supplier ..... Chemiplas Limited

#### Twist ‘n’ Pop Cap:

Tool Designer ..... Sistema Design Team  
Toolmaker ..... Classic Engineering  
Manufacturer ..... Sistema Ltd  
Raw Material Supplier ... Basell / Elastochem

“Sistema” is a world-leading brand in the household plastic container market due to their innovation, design, and superb quality. A decision was made to develop the ‘World’s Best Drink Bottle.’ After much design, prototyping, and testing, an ergonomically shaped bottle with a unique, vented, “twist’n’pop” cap was developed. Buyer interest at the recent “Chicago Housewares Fair” has confirmed that this product will be a huge commercial success largely due to its Kiwi ingenuity.



## Methven Ltd

### Shower Infusion

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

Client ..... Methven Ltd  
Designer ..... Methven Ltd  
Tool Designer ..... Methven Ltd  
Toolmaker ..... Methven Ltd  
Manufacturer ..... Methven Ltd

#### Full-body moisturising and aromatherapy while you shower.

Simply attach the Infusion Pod to your existing shower, insert one of the Infusion Cartridges, turn it on and you’re ready for a showering experience unlike any other.

There are four replaceable Cartridges to choose from. With naturally derived ingredients Harakeke, Kowhai and Kawakawa, each Cartridge is designed to sooth, nourish, revitalise and replenish your skin.

With a Methven Infusion Pod every shower becomes part of your daily skincare routine.



# Millennium Plastics Ltd

## Fonterra Milk Sample Vial

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

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

The RFID Milk Sample Vial incorporates a unique dual closure system to minimise the risk of sample contamination, offers security against tampering, and allows for a reusable RFID tag to be fitted for data collection.

The Vial was developed as part of Fonterra's Milk Collection Programme of Work (MCPOW) to ensure a high level of integrity in respect to the collection and testing of milk samples from it's 10,000 plus suppliers.

The dual closure system ensures the Vial is fully sealed at the manufacturing stage and resealed once the milk sample is collected. This has significantly reduced the risk of sample contamination.

The RFID tag electronically stores data at the point of collection and this is read and used by the testing laboratory. The Vial and data enhancements have allowed for significant automation to be installed at the testing laboratory and improved tracking of samples.



# Millennium Plastics Ltd

## Stella Disinfection System

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

Client ..... Stella Performance Ltd  
Designer ..... Stella Performance Ltd  
Manufacturer ..... Millennium Plastics Ltd

Stella is a revolutionary instrument disinfection system that enables the decontamination of endoscopes, ultrasound equipment and manometry catheters using Fuse for Stella high-level disinfectant.

Stella combines a micro-processor controlled process with the speed, simplicity, ease of use and economy that only a manual soak tray has offered up to now. It helps reduce the risk of cross patient contamination and raises the standard in manual instrument disinfection to a new level. Stella provides hospitals and clinics many benefits, some of which include:

- Quick turnaround of instruments, which speeds up patient throughput
- Controlled exposure time of disinfectant contact to instruments, ensuring that expensive equipment is not damaged
- Reduces manual processes that currently consume valuable resource time
- Electronic audit trail and data storage ensures compliance with best infection control practice
- Significant cost saving in comparison to full automated washer disinfectors.



# Monaghan Plastics Ltd

## Keylenz®

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

Client ..... Keylenz Ltd  
Designer ..... Solid Engineering / Zetec  
Tool Maker ..... Icon Tooling  
Manufacturer ..... Monaghan Plastics Ltd

With a Keylenz® on your key-ring, you'll never worry about forgetting your reading glasses again! Keylenz® is a new optical-quality emergency reading aid, designed for reading the fine print on maps, menus, product packaging etc.

Its cleverly designed universal lens suits the vast majority of people with age-related presbyopia (difficulty focusing on near objects). What's more, this tiny polycarbonate device is so tough you could drive a car over it! Designed and manufactured in NZ.



# Premier Plastics Ltd

## Balance Jar Range

Category 1 ..... Food & Beverages  
Category 9 ..... Blowmoulding

Client Name ..... Vitaco Health Ltd  
Designer ..... Premier Plastics Ltd  
Tool Designer ..... Premier Plastics Ltd  
Manufacturer ..... Premier Plastics Ltd

The Vitaco Balance range of Sports Nutrition products was in need of a revamp and Premier presented an innovative packaging concept.

The existing packaging was starting to appear dated and did not compare as favourably as it should to its competition.

Premier's solution was to create a family range of jars with wide mouth openings to enable easy access to the product. A unique scoop locking system was devised to overcome the problem of scoops 'lost' within the packed powder.



## RX Plastics Ltd

### Airtech 9000 Waste Water Treatment System

Category 4 .....Building  
Category 16 .....Rotational Moulding

Client .....RX Plastics Ltd  
Tool Maker .....Menzies Group Ltd  
Manufacturer .....RX Plastics Ltd

The RX Plastics designed Airtech 9000™ waste water treatment system has been designed to compete in an industry dominated by heavy concrete tanks. This system is modular in design & features individual spherical rotationally moulded chambers connected to form a complete turnkey solution.

Designed in house at RX Plastics using Solid Works & Finite Element Analysis (FEA) simulation software. All Rotationally moulded components are manufactured at RX Plastics using PLC controlled machinery and assembled on site.



## Sealed Air (NZ) Ltd

### Oven Foam CPET Tray & VSP Film

Category 1 .....Food & Beverages

Client .....Rosa Foods Ltd  
Designer ..... Sealed Air (New Zealand) Ltd  
Manufacturer .. Sealed Air (New Zealand) Ltd

The Rosa range of meals, presented in the Cryovac® n'Oven™ tray and vacuum skin film. Major benefits delivered by the Cryovac® packaging:

1. Cool to touch straight from a conventional oven.
2. Reduced packaging weight of up to 30% compared to STD CPET & Polypropelene, for environmental and transport cost benefits.
3. 100% of manufacturing skeletal waste is recycled back into the process
4. Skinned by vacuum skin film that protects the product in transit by holding the meal firmly in place, and prevents spoilage from oxygen ingress.



# Sulo Talbot Ltd

## Advanced Curbside Collection

Category 18 ..... Environmental Achievement

Client ..... Sulo Talbot Ltd  
Manufacturer ..... Sulo Talbot Ltd

Sulo Talbot, a joint venture between Talbot Technologies and Sulo MGB Australia Pty Ltd was set up in 2008 to supply curbside collection systems to the New Zealand waste collection industry. Employing state of the art, energy efficient, moulding equipment and moulds, Sulo Talbot has in the first 18 months of full operation manufactured mobile garbage bins and crates for Curbside collection by councils throughout New Zealand, including: Christchurch, Selwyn, Queenstown, Palmerston North, Tauranga, Manukau, Marlborough, Masterton, Carterton.

The Company has completed the actual individual household deliveries to premises in Christchurch (3 bins) and Palmerston North (1 Bin, 1 crate) with first time accuracies of over 99% - well above normal international industry standards.

Sulo Talbot has also optimised the use of reprocessed material with crates made from 100% recycled material and mobile garbage bins using 30%. Palmerston North crates and bins were made using locally collected milk bottles as raw material.



# Talbot Technologies Ltd

## Metro UI Parking Meter Display Panel

Category 3 ..... Industrial  
Category 8ii..... Injection Moulding

Client ..... Shape Technologies Ltd  
Designer..... Design Energy Ltd  
Tool Designer..... Talbot Technologies Ltd  
Tool Maker ..... Talbot Technologies Ltd  
Manufacturer ..... Talbot Technologies Ltd

The Metro UI Parking Meter Display Panel, was designed for Shape Technology by Design Energy, working in partnership with Talbot Technologies. The panel is used on the parking meters that Shape supply to international markets, and is in-mould labelled with a co-moulded seal. The new panel has successfully solved issues with its predecessor relating to:

- 1) high cost,
- 2) poor quality
- 3) leakage into the electronics
- 4) delamination of the various layers
- 5) inability to match panel button features with the artwork behind



# Talbot Technologies Ltd

## Pie Networks Web Phone

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

Client ..... Pie Networks  
Designer..... Design and Industry Ltd  
Manufacturer ..... Talbot Technologies Ltd

Pie Networks based in Perth Australia wanted to introduce cutting edge Web based telephone systems into various markets throughout the world. Working with their Sydney based design team, Design and Industry, and Talbot Technologies, they have successfully launched a product that captures the imagination of end customers that are technology focused.

The user can enjoy the benefits of making a telephone call while surfing the net (in full page display) in public places such as shopping malls, airports, train stations etc.

The final product comprises of 3 pressure formed High impact ABS parts, all with undercuts, and a large formed and decorated High impact acrylic front privacy shroud.



# Talbot Technologies Ltd

## Inner Range Concept 4000 Graphite Terminal

Category 3 .....Industrial  
Category 8ii..... Injection Moulding

Client .....Inner Range Pty  
Designer..... Outer Space Design  
Manufacturer ..... Talbot Technologies Ltd

Melbourne-based Inner Range Pty is a supplier of security alarms to the international market. They produce some highly innovative alarm systems and, in keeping with this they commissioned a partnership between Talbot Technologies, and Outer Space Design (also Melbourne based) to develop a new key panel for their latest alarm system. The brief included the requirement for a backlit in mould labelled front surface, with halo lighting in several different colours, and a very thin area for a "racetrack" finger control; some complex lightpipes, and a snap-together case system. To make things even more complex there was a very tight timeframe with only a 6-week tool building and proving window.



# Talbot Technologies Ltd

## Icon IMD Label & GT40 IMD Label Tool

Category 13 .....Thermoforming  
Category 20 ..... Toolmaking

Client .....Fisher & Paykel Healthcare  
Manufacturer .....Talbot Technologies Ltd

When Fisher and Paykel Healthcare decided they wanted to take a new product to market, it had to be cutting edge, functionally pleasing, and very aesthetic and modern.

The product required a durable surface preferably in a metallic finish, this has been achieved by thermoforming an IMD label, manufactured from a co extruded Senotop PC/ABS sheet with a PMMA cap ( total pre forming gauge of 1.00mm).

The label has been formed over a 175mm deep draw Male tool, with under cuts on all four faces.



# Talbot Technologies Ltd

## Icon IMD Housing

Category 20 ..... Toolmaking

Client .....Fisher & Paykel Healthcare  
Manufacturer .....Talbot Technologies Ltd

The creation of an in-mould labelled housing for Fisher & Paykel Healthcare's new ICON flow generator required the design, development, and tool manufacture of a very special mould, with a large number of cores to accommodate undercuts inside and out, and equally unique post- and pre- processing plant. The process utilizes two 7-axis robots working in tandem, in a purpose-build processing unit designed by Design Energy, and produced by Shape Technology in partnership with Talbot Technologies.



# Talbot Technologies Ltd

## Icon Sleep Apnoea Device

Category 5 ..... Consumer Products  
Category 8ii..... Injection Moulding

Client .....Fisher & Paykel Healthcare  
Manufacturer .....Talbot Technologies Ltd

Fisher and Paykel Healthcare’s new ICON sleep apnoea flow generator features some highly innovative plastics technology. Talbot Technologies partnered FPH in the design development of ICON and supplies up to 5 in-mould decorated parts in some models, up to two plated parts, inserted magnetic Hall Effect sensors, and two intricate co-injected parts. The process plant purpose-designed for production of the parts include 7-axis robots working in tandem; and collapsing core moulds both for thermoforming labels, and injection moulding IMD parts. Market demand has far exceeded forecast, and commentaries from analysts such as Golman Sachs J B Were predict massive growth as a result of the innovative features of the new flow generator.



# Talbot Technologies Ltd

## Icon Airbox

Category 20 ..... Toolmaking

Client .....Fisher & Paykel Healthcare  
Tool Designer .....Talbot Technologies Ltd  
Tool Maker .....Talbot Technologies Ltd  
Manufacturer .....Talbot Technologies Ltd

The airbox for Fisher and Paykel Healthcare’s new ICON flow generator (sleep apnoea device) features complex two-plane co-injection achieved by use of a novel mould with a rotating moving half, and retracting side cores. The mould was designed and built by Talbot Technologies in their Christchurch Tool Room.



# Tru Test Ltd

## Innovative Quick Die Change

Category 20 ..... Toolmaking

Client ..... Tru Test Ltd  
Designer ..... Tru Test Ltd  
Tool Designer ..... Tru Test Ltd  
Tool Maker ..... Tru Test Ltd  
Manufacturer ..... Tru Test Ltd

With the desire to improve customer service, an innovative Quick Die Change process was developed in-house by the Tru-Test Group Polymers team. The result? A reduction in die change time from 45 minutes down to 2 minutes.

The process involved brainstorming and numerous simulations of ideas. Through the reduction in die change time, inventory was also significantly reduced and a 1 day delivery commitment was put in place. All these results for less than \$10,000!



# Viscount Plastics Ltd

## Cookie Time Pail

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

Client ..... Cookie Time Ltd  
Designer ..... Mitchell Design  
Tool Designer ..... Mitchell Design /  
Plastics Design Technologies  
Tool Maker ..... Camex / Icon Tooling  
Manufacturer ..... Viscount Plastics Ltd

Viscount developed an innovative new bucket design incorporating groundbreaking new technology – Inmould Labelling (IML). IML introduces pre-printed polymer labels into the moulding process to create a seamless fusion of label and rigid plastic packaging. IML proved to be far more cost-effective for Cookie Time, removing the need for a secondary labelling operation, saving the company labour and production costs. The new technique also boosted the branding impact of the product helping Cookie Time to reach record Sales in 2009.



# Viscount Plastics Ltd

## EZYSTor 400ml

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

Client ..... EDL Fasteners Ltd  
Designer ..... Mitchell Design  
Tool Designer ..... Mitchell Design /  
Plastics Design Technologies  
Tool Maker ..... Camex / Icon Tooling  
Manufacturer ..... Viscount Plastics Ltd

A partnership between Viscount Plastics and EDL Fasteners has trumped the traditional round PET jar for screws and fasteners with rectangular 400ml 'flip lid' plastic packaging that is taking EDL Fasteners to the forefront of brand identity and consumer appeal in hardware stores. The brief for the EZStor was to be translated into freight and shelf efficient dimensions and for the lid to allow quick, easy and comfortable finger access. The rectangular shape has also allowed EDL Fasteners to implement highly visible colour coded labelling that at a glance, identifies the type of screw, its corrosion protection level and common use.



# Waipak Ltd

## Milk Bottle 1 Lt

Category 9 ..... Blowmoulding

Client ..... Bearsley Group/ Pacific Organic  
Designer ..... Waipak Ltd  
Manufacturer ..... Waipak Ltd

A glass replacement lookalike and feel was required for this product as it is high end and traditionally would have been in European imported glass. Waipak developed a hot fill smooth wall glass replacement. This has taken two years to develop and bring to market, no bellows panels and still able to be filled to 76Deg C.



# Waipak Ltd

## 3-D Printed Mould

Category 20 ..... Toolmaking

Client ..... Waipak Ltd  
Designer Waipak Ltd/ Axia Design Group Ltd  
Manufacturer ..... Waipak Ltd

In the FMCG market place the success of new product implementation is relatively low, Waipak saw an opportunity if they could come up with a low cost short lead time process which would allow the market to experiment more with new designs and concepts.

The end result allows Waipak's customers' to have a filled, labelled and packed item ready to be presented to their market in as low as seven days!



# Waipak Ltd

## VnC Mini Shaker (200mls)

Category 1 ..... Food/Beverage

Client ..... VnC Cocktails Ltd  
Designer Waipak Ltd/ Axia Design Group Ltd  
Manufacturer ..... Waipak Ltd

VnC Cocktails Ltd required a single serve pack to take on the highly competitive but rewarding Airline beverage business, currently we order a drink then get a cup, now you get both. All in one and no spills!

The design encompasses the stylisation of the old school cocktail shaker but with modern graphic impact.



# Waipak Ltd

## VnC Cocktail Bottle (700mls)

Category 1 .....Food/Beverage

Client ..... VnC Cocktails Ltd  
Designer Waipak Ltd/ Axia Design Group Ltd  
Manufacturer ..... Waipak Ltd

VnC Cocktails Ltd wanted to revamp their current cocktail bottle to meet further export demand. The bottle needed to be volumetrically less but have the same height and girth as the current one litre bottle.

So keep it simple!

A cylindrical shaped over cap to match a bottle with a heavy wall feel was the requirement and that's what was delivered.



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We strive to improve the capability and international competitiveness of New Zealand businesses.

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The New Zealand Plastics Industry  
Design Awards 2010  
Supreme Award

PLASTICS  
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