

Hungry for growth

Interest in the polystyrene compacting machine, created by Chris O'Brien, is growing across Australia and the world because of its waste minimisation benefits as **Nicola Card** reports.

EVER WONDERED what happens to all that polystyrene packaging used to protect white goods or market produce? After a single use, most of it will spend several centuries idling in landfill. Technically classified non-biodegradable, bulky but lightweight polystyrene takes literally hundreds of years to break down.

Surprisingly, however, polystyrene is just two per cent substance and 98 per cent air. That's what youthful entrepreneur and environmental crusader Chris O'Brien discovered when creating a machine capable of compacting it.

"Polystyrene particles are held together by polymerisation, so by squeezing out air, the material – small moulded bubbles – still holds its structure, which enables the

product to compact in a safe yet non toxic way," explained O'Brien. "Unless polystyrene is compacted, a waste disposal truck may be fully loaded up but weighing just 9kg, so that's a waste of diesel and other costs of transportation."

The trick, he believed, was to compact at the source, which avoids transporting the "voluminous" material.

Described as an on-site compacting solution, O'Brien's invention the Hungry Giant was launched on the market in mid 2007 and can now be seen 'feeding' at retailers such as The Good Guys and Harvey Norman, slashing their waste disposal charges by more than 70 per cent and minimising environmental harm.

"Compacted material is collected free of charge by recyclers and re-moulded into low density plastic products like disposable camera cases and picture frames. The value of the material is very high so it's a win-win for everyone involved," O'Brien said.

Success did not happen overnight: prototype development was a four-year slog with a series of hits and misses that failed to get the better of the resourceful and resilient O'Brien.

Experiencing China

Researching Chinese plant manufacturers over the web O'Brien – then aged just 20 – sourced what he thought may be a suitable machine, however on arrival in ►



Chris O'Brien's invention the Hungry Giant is happy chomping on and recycling polystyrene

BUSINESS SUCCESS

Sydney it failed in the task. Subsequent modifications produced a machine “too clunky and labour intensive”. Clearly he needed to get closer to the action to make it work.

O’Brien’s two-year quest for the perfect working model took him eight times to China, “because [otherwise] things get lost in translation over the phone,” he said. Few importers are as well acquainted with the region as O’Brien, who spent two months overseeing development in the factory located in remote ChangZhou, three hours west of Shanghai. It was a mission he undertook with the blessing and financial support of his fiancée Amanda, his “pillar of strength in the emotional roller coaster journey”.

“There I was, a six foot four Anglo Saxon Australian living out of a tiny hotel room. By day I was in the factory fabricating steel and handling production problems like gear ratios versus heat generation, which I had to figure out myself as I have no engineering or mechanical qualifications or training. By actually being there it meant I could push harder and each day I could check progress. In eight weeks we’d successfully fine-tuned and tested machinery that would dispose of or reuse foam – granulating and compacting polystyrene by 50 to one.

“But the entire episode seemed more like 12 months than two. What are usually the simple things in daily life, such as buying food or getting dinner, proved tough. At least I now speak broken Mandarin and can communicate just well enough to get by on the phone from Australia to explain things.”

Weighing just under one tonne, the Hungry Giant machines are a shade under two cubic metres. At the six months’ mark, O’Brien had sold enough Hungry Giants to be looking to break even soon and is poised for business expansion as retailer interest escalates and the National Packaging Covenant of 2010 draws closer.

“The Covenant is a call to industry for action to curb levels of non biodegradable waste going to landfill. Some large waste companies are spending millions building and developing MERFs, the state-of-the-art waste sorting facility using floatation technology to sort waste but it costs millions to develop, whereas the Hungry Giant is relatively compact and on site. No transportation fees are necessary. Ultimately the buck stops with the waste generator; that is where the problem needs to be sorted.

“Using the Hungry Giant, The Good Guys in Chatswood have reduced their monthly Cleanaway bill from \$1500 to just \$370 so they are saving more than \$1100 each month. That means our machine pays for itself in less than a year... in many businesses machines are amortised over three to five years.”

Living up to their name, the Good Guys are happy for O’Brien to demonstrate the benefits of the machine to potential customers. He’s now in discussions over investment finance in a bid to reduce the three-month lead-time on machines, which on arrival in Australia undergo a series of finishing touches before completion and delivery.

“We paint and wire machines and apply internal coatings to the imported machines here in Sydney as it helps

keep the design secure and protect our IP,” O’Brien explained. In a further move to prevent copycats he has provisional patents on the machinery design and registered trademarks on the brand.

A 17-hour working day is not unusual for O’Brien, whose company Cobsa International Trading Corporation, employs just one person in sales and subcontracts an engineer for servicing and monitoring while he handles everything else.

After leaving school he developed a commercial cleaning business around south Sydney but as a sideline worked in a bulky goods warehouse, and while there he noted the problems of discarded polystyrene packing.

To help build his Hungry Giant business O’Brien successfully applied for a \$70,000 COMET (Commercialisation of Emerging Technology) grant, which, “strictly for suppliers, supports such items as strategic planning, business structuring, and marketing,” he said. He has commissioned a marketing company to animate the image of the Giant – a popular creature thanks to Shrek – and prepare a DVD.

With interest in the Hungry Giant emerging in the US and UK, O’Brien is optimistic that, one day, his compactor will be a giant success the world over. ●

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