

## METAL CLOSURES



Packaging Products del Peru supplied its lightweight LG crowns to SABMiller's operations in Peru

Having introduced thinner-gauge metal crowns on its bottled beers in Peru in 2010, SABMiller – the world's second-biggest brewer – is planning to make even bigger cost savings by expanding the project to the rest of Latin America and Europe.

"We are deep into the process of switching all of our pry-off crowns in these markets to lightweight and non-PVC versions," says Doug Hutt, global packaging materials development consultant at SABMiller.

The brewer commercialised its weight-saving metal crowns with manufacturing partner Packaging Products del Peru (PPP), which supplied the local subsidiary – Unión de Cervecerías Peruanas Backus – with versions made from 0.17mm tinplate.

Used on the brewer's Cristal, Cusqueña and Pilsen brands, the lightweight crowns form part of an overall strategy at SABMiller to reduce the environmental impact of metal crowns in its key markets.

"Our research into packaging identified that more than 95 percent of crowns were ending up in landfill," explains Hutt, who is based in the UK. "So we came up with a long-term sustainable model for producing and disposing of crowns that looked at reducing their weight and migrating away from PVC materials used in their production."

The project began with Backus using around 20 million of the lower-gauge crowns at its San Juan plant in Pucallpa city in 2010. Following this successful pilot, the low gauge crowns were rolled out across the company's remaining four breweries in Peru.

"We decided to start this project in Latin

# Crowning glory



SABMiller is rolling out its lightweight crown project into more markets, reports Tom Woerndl

America because it is such a big and important market for SABMiller," notes Hutt. "In addition, PPP are a leading innovator in this field with the necessary expertise to help us realise our goals.

"We are currently working with a crown manufacturer based in Europe to down-gauge on this continent.

"While we are well on our way to reaching our goals with pry-off crowns, for twist-off formats we face a challenge of finding an alternative to PVC that offers the same gas barrier, but are in the process of engineering a solution with our partners."

Hutt says that in most cases, capping machines do not need to be modified to handle lower gauge crowns. "Of course, it depends on how old the technology is, but generally we try to ensure that the crowns run on existing machines," he says.

The process of testing lightweight crowns has been improved thanks to a methodology devised by PPP in collaboration with VLB Berlin (International Brewing Service, Research & School).

"This crown deformation test examines the relationship between crimp diameter and the flat panel on top of the crown," says

Hutt. "We are trying to make the test an industry standard and it is extremely useful for looking at what might go wrong during the filling and crowning process and understanding why it when wrong."

At the forefront of crown lightweighting technology, PPP recently unveiled an even lower gauge, second-generation closure called LG2.

The crowns are manufactured from DR9 tinplate and being offered in a range of gauges down to 0.14mm – the thinnest ever used. Licences for the technology will be offered for the crowns to be made in Asian markets from next year.

PPP has already supplied 0.15mm crowns to beer and soft drinks producer AJE-Peru, for which it won the Gold Award in the Ends, Caps & Closures category at *The Canmaker* magazine's Cans of the Year Awards 2013.

So far, PPP has produced more than six billion of the LG caps, with claimed cost savings of between 8 and 10 percent, says managing director Alfredo Merino, who added that steel consumption is reduced by 18 percent compared with conventional crowns, which use a 0.20mm gauge.

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"There are already ten breweries in South and Central America using this cap, with the same or better performance than the previous one with the standard gauge. These clients use an annual volume of more than 15bn units," says Merino.

"These closures can be used not only for the brewing sector but also for the carbonated drinks market, fulfilling the most demanding specifications including pasteurisation."

Along with PPP, another company that is meeting increasing demand for lower gauge crowns is Italy's Pelliconi. General manager Pierluigi Garuti says that down-gauging is now "a major trend", with brewers and beverage companies seeking to improve their sustainability.

The Bologna-based company's 0.18mm Smart Crown "continues to be successful in Europe, with the Asian market also opening up to lighter weight closures," adds Garuti.

"There is potential to engineer even

lower gauge crowns, but we envisage there might be a need for changes to the filling process for such a project to be successful. Nevertheless, it is always our aim to make lighter and more environmentally-friendly products."

Another area of expansion for crown manufacturers is ring-pull closures, a number of which are currently on the market. Pelliconi first introduced its Maxi-P cap in 2008.


"The market in general for ring-pull crowns is expanding significantly," continues Garuti. "A number of brand owners have started using this type of closure in Europe, with the Asian market also growing."

According to Garuti, currently about 90 percent of ring-pull crowns made globally are used for beer.

"The brewing industry has really embraced this type of crown," he says, "but recently we have also seen interest from

other types of products, such as soft drinks, energy drinks and fruit juices. We also see Maxi-P as a solution for other industries like the cosmetic and pharmaceutical sectors."

Another major player in the crown market that is developing lighter crowns is Polish metal packaging specialist Can-Pack. The company, which sells around 30bn crowns a year, has unveiled a 0.15mm closure to complement its lower-gauge 0.18mm versions already on the market.

In addition, the company – which has seven crown production plants – launched its ring-pull CP Cap last year, with brand owners currently using the crown for commercial applications. 

*More information from Can-Pack Metal Closures, Jasnogórska 1, Kraków 31-358, Poland. Tel: 48 126 623 403. Fax: 48 126 623 765.*

*Web: [www.metalclosures.eu](http://www.metalclosures.eu)*

*Packaging Products del Peru, Av. Minerales 349, Lima 01, Peru. Tel: 511 611 6611. Fax: 511 561 2753.*

*Web: [www.packagingperu.com](http://www.packagingperu.com)*

*Pelliconi, Via Emilia 314, Ozzano Emilia (BO) 40064, Italy. Tel: 39 0516 512 611. Fax: 39 0517 99 317.*

*Web: [www.pelliconi.it](http://www.pelliconi.it)*



*Pelliconi's ring-pull Maxi-P and lightweight Smart Crown*



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**WALLRAM**  
Werkzeugtechnik GmbH  
Schürmannstrasse 40  
D-45136 ESSEN

Tel.: +49 201 89636-0  
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Mail: [sales@wallram.de](mailto:sales@wallram.de)  
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