

# IN IN

BY SIDEL MARCH 2012

**STACK &  
PACK 54**

**A Wealth of  
Values at the  
Service of  
Innovation 30**

ENVIRONMENTAL RESPONSIBILITY

**Think  
Green 62**

Non-Profit Group Orée  
Helps Businesses Make  
a Positive Difference

**Raising  
Standards  
in PET 50**

**100%  
DRY 35**

**Questions  
that Inquire**



**Answers that  
Inspire 04**

**JUICY  
AMBITIONS 27**

**Double  
Equipped 40**

**QUALITY FROM  
THE OUTSIDE IN 42**

The New Distinctive Look of Penta Water  
Bottle Improves the Perceived Quality



# CONTENTS



62

## QUESTIONS THAT INQUIRE ANSWERS THAT INSPIRE

- 06 Otsuka-people creating new products for better health worldwide
- 10 Serving China
- 12 Making sense of sensitive products
- 16 Strong & Sensitive



26

## THINK GLOBAL ACT LOCAL

- 22 From the powerful potential of PET to juicy ambitions in Saudi Arabia
- 30 From a wealth of values in France to “Prevención” de Packaging in Spain
- 38 From the most advanced blow-molding technology in Mexico to Ultra-Success in the US
- 44 From Original Tea in PET in Taiwan to More Efficiency & Lighter Bottle in Indonesia



12

## INVENT TODAY IMPROVE TOMORROW

- 48 Stretching out the quality
- 50 Raising standards in PET
- 53 With Original pulp
- 54 Stack, Stack, Stack & Pack
- 57 The whole package
- 58 Local shrinking
- 59 Weight & Volume



54

## SHORT-TERM BENEFITS LONG-TERM CHANGE

- 62 Think Green
- 65 Becoming an Eco-world

# RAISING STANDARDS FOR SENSITIVE PRODUCTS

Sensitive products have become the fastest growing area for PET bottles in recent years. Consumers around the world increasingly drink juices, ready-to-drink teas, isotonic drinks and dairy products. This has major consequences for beverages providers. First, they are understandably increasing their production of sensitive products. Second, they need to increasingly offer differentiated products to their end consumers. In both cases, they require packaging solutions that are reliable for the increased production and flexible to cater to different packaging formats and types with minimal production downtime and cost. At the same time, the ever-present needs to reduce resource use and control costs require solutions that are also simple, efficient and sustainable.

At Sidel, we have a dedicated sensitive products team to cater to such specific customer needs. The team comprises experts from many different fields, including engineering, microbiology, hygiene, bottle design and product-and-packaging interaction. Their approach is to work closely with our customers understanding their products and needs. True customer partnerships are not just an ambition for us, they are mandatory. This is why in this issue of Inline, we spoke to a cross section of our customers and other industry players to listen to and understand their unique perspectives.

We spoke to beverage industry analysts from Euromonitor International and received an independent perspective on sustainability from Orée, a France-based non-profit organization dedicated to promoting environmental best practices in business. Contributing to the latter article is Ghislaine Hierso, Orée’s President, who also graciously agreed to be our cover star for this issue. We also listened to our customers from around the world, including Aujan and Hana Water in Saudi Arabia, Byrne Dairy and Penta Water in the US, Hon Chuan in China, Jugos del Valle in Mexico and Otsuka in Japan.

Our customers have unique needs that share a common theme: they are all demanding and challenging. This is fantastic for us, because we learn from meeting their demands and overcoming the challenges they set us. Such learning is fed back into our research & development efforts, resulting in a range of new technologies. This includes innovations for our ultra clean, hot-fill and market-leading aseptic solutions. Examples include our SBO Compact2, high-speed Combi Predis FMa, Veloce ISD and Sensofill FMa, which are all helping to set new standards for packaging sensitive products and also are featured in this issue. Throughout this cycle of learning and innovating, we have a single priority: food safety. For Sidel, food safety is more than just a customer requirement – it is an absolute value where we accept no compromise.

I hope you enjoy reading about sensitive products and our other topics in this latest Inline issue.

Best regards,

MART TIISMANN  
Sidel President & CEO



Cover page: Ghislaine Hierso, President of Orée.

**Publisher** Sidel International AG **Executive Producer** Nicholas Bloch **Chief Editor** Jennifer Cariou  
**Editorial Team** Jennifer Cariou, Marilyn Chua, Hollie Davis, Bill Fahber, Rebecca Nicholl, Jean-Marc Passemar, Sylvie Rak, Martin Scott, Sidese **Art direction** Kunde & Co, Christophe Leroy **Photograph** Patrick Boulon, Christophe Leroy, Vincent Rustuel, Niels Stollenborg, Purple Production, thinkstock.com **Thanks to** Aujan, Chinese Beverage Industry Association, Euromonitor International, Jugos del Valle, Miniwiz and Otsuka for authorizing the use of photos **Contribution** Marilyn Chua, Hollie Davis, Luc Desoutter, Wolfgang Glebe, Valérie Hauchecorne, Interface, Susana Magnani, Paola Mignani, Nink Praeporn, Grazia Prini, Sylvie Rak, Françoise Raoul-Duval, Magali Rioult, Monica Romero, Sidese **Printing** Jørn Thomsen Elbo A/S **Contact** group.communication@sidel.com **INLINE Magazine** is published twice a year and is available in English, French, Italian, Spanish, German, Portuguese and Chinese. nr. issn: 2109 410. Printed in March 2012, 14,000 copies. The next issue will be published in October 2012. All rights reserved. No part of this publication may be reproduced or electronically distributed without the prior permission of the publisher. Botte Switch, Combi Predis/Capdis, Combi DISIS, Ecoven, EIT, Kohlox, SBO Universal, SBO Universal2, SBO Universal2eco, SBO Compact, SBO Compact2, Smar, Versafilm are trademarks of the Sidel Group.





Q

QUESTIONS  
THAT  
**INQUIRE**

ANSWERS  
THAT  
**INSPIRE**

A



INTERVIEW WITH OTSUKA PHARMACEUTICAL

OTSUKA-PEOPLE  
CREATING NEW PRODUCTS FOR  
BETTER HEALTH  
WORLDWIDE

SIDEL HAD THE OPPORTUNITY TO INTERVIEW MR. YOSHINARI WATANABE, DIRECTOR, MANUFACTURING PROCESS DEVELOPMENT DEPARTMENT (NUTRITIONAL PRODUCTS), PRODUCTION HEADQUARTERS, OTSUKA PHARMACEUTICAL CO., LTD., ABOUT THE COMPANY’S PHILOSOPHY, ITS COMMITMENT TO INNOVATION IN BEVERAGES AND FOOD PRODUCTS, AND THE STEPS THEY ARE TAKING TOWARD SUSTAINABILITY.

**Q Otsuka Pharmaceutical is committed to the overall health and well-being of people and is engaged in business activities that support the health of people. Can you tell us more about Otsuka Pharmaceutical’s core values and philosophy?**

**A** Based on the philosophy of our company, “Otsuka-people creating new products for better health worldwide,” we work to create and deliver innovative products that contribute to global human health and well-being. This philosophy motivates all our colleagues and inspires their everyday approaches. We value “creating” activities with a global view. Focusing on the excellent nutritional value of soybean, which is an integral part of Japanese food culture, our company is actively engaged in the concept of “Soylution” (soy+solution). With “Soylution,” we say that soybean consumption can solve people’s health, food, and environmental issues

around the world. Under this concept, we develop soybean products and propose new dietary forms for people worldwide to consume soybeans. Also, as a company involved in the life sciences, we have been providing medicines, food, and other aid to people affected by natural disasters such as tsunamis and earthquakes in Thailand, the Philippines, Taiwan, and Japan. Our company is working to achieve environment-friendly packaging to reduce energy consumption since we use a number of raw materials and packaging materials in manufacturing. One of our approaches was to develop lightweight 500 ml PET bottles by reducing the weight from 27 g to 18 g. This improvement is one of our contributions to protect the environment and our energy resources. We are also considering energy reduction in relation to the transportation of our products. By adapting in-house blowing, the number of trucks used to

transport empty PET bottles has been decreased, resulting in a reduction of carbon dioxide emissions.

**Q Why did Otsuka Pharmaceutical expand its business into the consumer beverage area as well as the pharmaceutical business area?**

**A** Our company was initially involved in marketing pharmaceutical products. In 1971, we established our own research institute; in 1980 we began manufacturing and distributing new pharmaceutical products developed in-house. We started the beverage business with a desire to contribute to not only curing diseases but also maintaining and improving day-to-day well-being. We always ask ourselves, “How can we contribute to better health for people?” We can develop and distribute beverages and food products (Nutraceuticals: Nutrition + Pharmaceuticals) based on scientific evidence. ➤

Otsuka Pharmaceutical Co., Ltd. is committed to the health and well-being of people around the world, manufacturing and distributing pharmaceutical products, clinical testing and medical equipment, food products, cosmetics and other related products. The company originated in Tokushima, Japan and has its head office in Tokyo.



“

WITH UNCONVENTIONAL IDEAS, WE CONTINUE TO CREATE NEW VALUES.



As a total healthcare company, we constantly contribute to resolve medical needs and improving well-being.

**Q Otsuka Pharmaceutical is a research and development driven company. In general, what is Otsuka Pharmaceutical’s approach to innovation and what are the main challenges in the creating successful new products?**

**A** “Innovation” is an easy word to say but not an easy one to realize. With unconventional ideas, we continue to create new value. The most important element of innovation is “passion.” We never give up. Once our company sets a goal, we use imagination and creativity to achieve it. Our research and development are not initiated by consumer research but rather inspired by ideas on “products desired by the world in the future” and “products we wish to create.” We do not imitate other companies’ products. We develop products for people’s health through creativity. Under our company philosophy of “Otsuka-people creating new products for better health worldwide,” we always work to develop new products that contribute to people’s health in the world. Our production division approaches developing manufacturing technolo-

gies to enhance the quality of products and reduce manufacturing costs at the same time. Raising the quality of products and reducing costs may seem contradictory, but we believe that solving seemingly contradictory questions is the creativity of production. If I were asked which is more important, product content or packaging, I would say both are equally important. Development of both user-friendly packaging and packaging that protects product content is important for consumers. Therefore, we always work from the consumer viewpoint to create products that satisfy both needs.

**Q Sustainability is key for Otsuka Pharmaceutical. What is your agenda in terms of sustainability?**

**A** As you are aware, light-weighting technology of PET bottles is advancing quickly. The 18 g bottle that we developed is not our final goal. We are looking into the potential of further bottle development and always consider environment-friendly bottle development in a creative way. Today, even with no quality issues, if a product is close to its expiration date or beyond it, there are many cases in Japan where the product is thrown away and wasted. For the sake of sustainability, we develop technologies that extend

expiration dates and minimize waste. We also work to improve filling methods in order to further improve product quality. As a result, we can even extend expiration dates. For example, with our 500 ml PET bottle, we have succeeded in making the expiration date for the 18 g bottle longer than the 27 g bottle. It is generally said: the lighter the bottle, the shorter the expiration date. Our new technology allows us to simultaneously enhance both the quality of the bottles and the quality of its content.

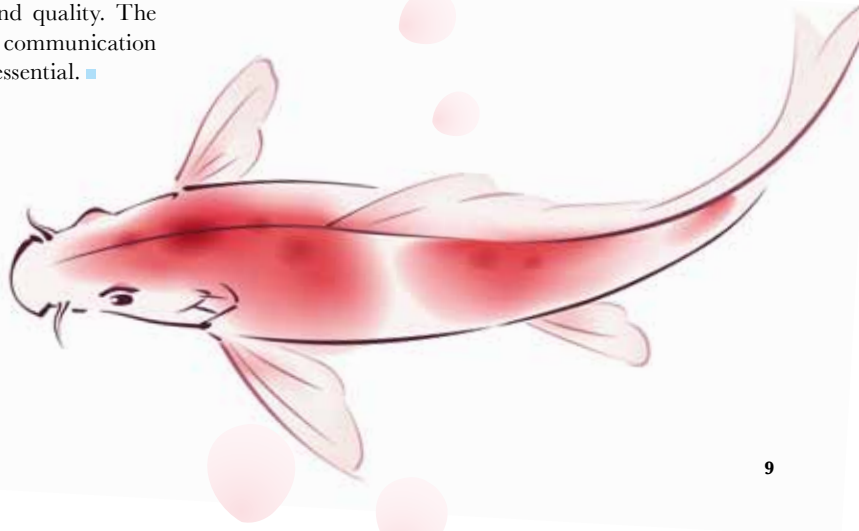
**Q Otsuka Pharmaceutical already established various subsidiaries outside Japan. How does Otsuka Pharmaceutical pursue the internationalization of its beverage business?**

**A** One of our representative products, Pocari Sweat, was developed as a “health drink consumed in situations when people perspire” and was released in Japan in 1980. Now, it is also manufactured outside of Japan and sold in 16 countries and regions. While we provide high quality products in each country, we also propose situations in which people drink that match the local cultures. For example, in Japan, Pocari Sweat is normally consumed when people perspire during or after exercising or taking a bath.



However, the situations in which people drink Pocari Sweat differ from one country to another. It is consumed as a water replenishment after fasting in some countries. Our colleagues in each country use their imagination and creativity to suggest culturally relevant situations in which consumers may drink the product as a water replenishment in their daily lives. To deliver the same quality of Pocari Sweat to consumers from factories all over the world, our production and quality control specialists in Japan regularly visit each factory to verify the quality. Each has the same manufac-

turing manuals and the same manufacturing process and quality control system. Also, products manufactured in each country are regularly submitted to us to evaluate taste and quality. The constant and speedy communication among the factories is essential. ■



# SERVING CHINA

INTERVIEW WITH MRS. ZHAO YALI, PRESIDENT OF CHINA BEVERAGE INDUSTRY ASSOCIATION (CBIA)

INLINE TURNED TO THE PRESIDENT OF CBIA FOR AN INSIDE LOOK AT THE BEVERAGES INDUSTRY IN CHINA AND THE CURRENT MARKET TRENDS.



ZHAO YALI,  
President of CBIA

Since its economic reform 30 years ago, China has enjoyed decades of extraordinary growth with urbanization growing at a pace faster than most of the other developing economies in Asia. As income levels and spending power continue to improve, China’s beverage market grew in tandem. Over the last 10 years, the Chinese beverage industry has grown consistently by over 20%. At the end of 2010, the total beverage production (excluding dairy and beer) hit a new high of 100.8 million tons achieving a growth rate of 25.8%. China’s beverage market boom stems from a relatively low consumption base. With a per capita consumption of less than 100 liters in 2011, the country has one of the lowest consumption levels of soft drinks in the world, thereby generating enormous growth potential.

**Q What are the main trends in terms of beverage consumption today in China? And looking on-wards, how do you see the market developing in the next 10 years?**

**A** The 30th year of development for the Chinese beverage industry was marked in 2011. In the last three decades, the market has evolved from growth in volume to growth in quality, with strong

investments in product development and beverage production driven by both local and foreign players.

Last year was an eventful year for the industry. Hit by several food safety issues, we saw a dip in beverage sales in the months of July and August. Although the year ended on a positive note, with sales rebounding strongly in September 2011, new product introductions were very slim. Beverage companies also have to grapple with mounting inflationary pressures and rising operating costs. Driving sustainable growth thus remains a challenge for all beverage companies. I would sum up the key challenges as follows:

- Food Safety Issues: As beverage products become more and more of a daily necessity, end-consumers are today increasingly aware of the importance of food safety.
- Rising total cost of ownership: The cost of raw materials, such as sugar and PET resins, as well as labor and logistics is expected to continue rising hence putting a downward pressure on profitability margins. This is inevitably driving up the price of the final product. In the first half of 2011, the top 20 beverage companies in China had 27.39% growth

in sales but in comparison, profitability only grew 11.41%.

- Driving innovation and production efficiency: Innovation is the key to the success of beverage makers. To drive growth, they must embrace change and transformation, raise productivity levels through logistics excellence and automation, drive product innovation and adopt changes in business operating models. Beverage products in China are now responding to the global trend for healthy and natural beverages. Carbonated beverages are less preferred and the industry is now focusing on developing fruit and vegetable juice drinks, plant protein drinks, tea drinks and other products that promote health and wellness.

**Q What is the Sustainability agenda of China?**

**A** China’s water and energy resources are becoming increasingly scarce. Environmental protection hence ranks high on the national agenda. Last year, the China Beverage Industry Association (CBIA) released the “2010 Report on Sustainable Development of the Chinese Beverage Industry,” with a vision to promote and enhance the sustainable development of the Chinese beverage

China Beverage Industry Association (CBIA) is a national organization established in 1993 whose aim is to promote the development of the Chinese beverage industry and to serve as the link between the government and enterprises. The association represents the common interest of all its members, comprised of beverage enterprises and institutions throughout the country. The current membership is more than 500 and their production amounts to 80% of the nation’s total. CBIA serves eleven beverage categories including carbonated drinks, fruit and vegetable juice, protein drinks, bottled water, tea, coffee and several others. [www.chinabeverage.org](http://www.chinabeverage.org)



industry. It is the first report CBIA released on sustainable development of the industry. We hope that, with the report, the communication between CBIA and the relevant stakeholders (government, consumer, employee, supplier, investor, community, cooperation partner, etc.) will be strengthened, and that the views and suggestions from the community will be heard, the concerns of the interested parties will be responded to in time, and the social responsibilities for these parties will be performed. At the CBST tradeshow held in Shanghai last year, sustainability was one of the key themes at the technology seminars. Many beverage companies

were there to share on their green vision and best practices in driving water and energy savings, etc. The Chinese beverage industry needs more green role models to make progress in sustainable development.

**Q How do key international players manage the “adaptation” of their beverages, especially dairy products or juices, to local tastes and cultures?**

**A** China has an ethnically diverse population with 56 ethnic groups all characterized by their distinctive eating and drinking habits. Understanding local preferences is therefore critical to

win in the highly competitive Chinese market. For instance, in the south, the climate is relatively warmer and people tend to spend longer hours outside shopping, eating and entertaining. People in the north and west tend to prefer high alcoholic content, partly because of the cold winters.

Many food and beverage companies, both local and global, have successfully influenced consumers’ purchasing and drinking patterns by introducing products and flavors that respond to consumers’ taste palates. This is accompanied by aggressive marketing campaigns and celebrity endorsements creating market needs and driving demand in new market segments.

In essence, nothing is more local than food and drinks and beverage companies need to continually invest in research and development to determine local preferences and capture consumers’ imaginations. ■



# MAKING SENSE OF SENSITIVE PRODUCTS

INTERVIEW WITH  
EUROMONITOR INTERNATIONAL

INLINE SPOKE TO THREE KEY EUROMONITOR INTERNATIONAL MANAGERS ABOUT THE CURRENT TRENDS IN THE BEVERAGE INDUSTRY INCLUDING THE RECENT RISE IN POPULARITY OF ‘SENSITIVE PRODUCTS’ LIKE JUICES, NECTARS AND LIQUID DAIRY PRODUCTS.

**Q** What’s currently driving the growth in the global drinks industry?

**A RH:** The market is being driven by the developing world and our data shows a lot of expansion in Asia Pacific, Latin America and East Africa.

**LL:** From a dairy point of view, China and India stand out. By comparison, more mature dairy markets like Western Europe and North America are growing at a slower rate but they are already so big that even if they grow by one percent, it will still be a significant absolute gain.

**RH:** There is also a definite trend from unpackaged towards packaged products. As economies in the developing world are expanding and people are getting wealthier, they’re able to afford to spend their money on packaged products.

**Q** How are multinationals reacting to these changes?

**A LL:** More and more big multinationals are realizing that the best way to reach these emerging markets is to have boots on the ground, both in terms of producing products as well as distributing them.

Nestlé, for instance, is investigating heavily in sub-Saharan Africa and developing new facilities in India. It is also expanding in Brazil and moving away from the big cities. Nestlé even has a boat that goes up and down the Amazon River selling Nestlé products.

**Q** So which products are driving this growth?

**A BP:** Juice, nectar, soft drinks, isotonic and tea (JNSDIT) are the main factors behind the growth. The market for carbonated drinks is still growing but not as fast as these other >



RICHARD HAFFNER (RH), Head of Beverages Research



LEE LINTHICUM (LL), Head of Food Research



BENJAMIN PUNCHARD (BP), Head of Packaging Research

“

FROM A HEALTH POINT OF VIEW,  
PACKAGING AND PACK SIZES HAVE  
A BIG ROLE TO PLAY.

categories. And within this segment, PET is performing well as a single serve, re-closable pack type.

*RH:* In many developing countries, drinks have traditionally been sold from kiosks which rarely have chiller cabinets, so they don't stock sensitive products like juices and milk drinks. Urbanization is changing this and there is a growing infrastructure for supermarkets with the facilities to store more of these products, and this is dramatically boosting sales.

**Q What about the perceived health benefits of these products?**

**A** *RH:* Health reasons are certainly helping to drive the growth and many consumers also see packaged products as more sanitary.

*LL:* India and China are both taking very active steps to promote this transition towards packaged products. The Chinese government has said that it wants every man, woman and child to drink a glass of milk a day for public health reasons, which is going to have a massive impact on future growth simply because there are 1.1 billion people in China. In India, the milk market is growing strongly but not simply because more consumers are drinking milk but because more people are drinking packaged milk rather than taking their bucket or jug down the road to the guy with the cow to fill it up.

*RH:* An interesting fact about juices and nectars is that the perception of

what's healthy can change from country to country. For example, a drink may have a juice content of around 20% and be considered healthy in China because of the added vitamins and pieces of fruit in it. But you can go to some countries in the developed world and a 100% juice drink can have negative connotations because of the high sugar content.

**Q What role is packaging playing in this growth?**

**A** *BP:* From a health point of view, packaging and pack sizes have a big role to play. We're seeing more and more juice shots being introduced. The drinks are between 150-200 ml, so the sugar content has been reduced by making them a smaller, more concentrated beverage. This appeals to people, especially parents, who want their children to benefit from the fruit but are happier that they are consuming less juice overall, and therefore less sugar.

Brand owners can still enjoy high unit gains from the shot style drinks because consumers will drink them on a daily basis, so volume consumption can be quite high.

There are several filling methods used to prevent these 'sensitive products' from suffering any kind of degradation in terms of look, taste and smell. Aseptic filling involves sterilizing the PET with chemicals and then rinsing the bottle at an ambient temperature in a closed environment. Hot-fill involves sterilizing the bottle and caps with the hot product itself, while retort is an old technology where filled glass

bottles are placed in a pasteurizer and the high temperatures sterilize the product and the packaging. A fourth way concentrates on the use of preservatives and is becoming increasingly unpopular with consumers.

**Q Are we seeing any other differences in the way in which drinks are packaged for different markets?**

**A** *BP:* In terms of pack size, in developed countries we're seeing a polarization where people are moving away from standard sizes to much smaller on-the-go packs, or much larger bulk sizes, which they keep in their fridge.

*LL:* This polarization is also being driven by affordability. Lower income consumers may not be able to afford a one-liter bottle of chocolate milk but they can afford a 250 ml or 500 ml bottle. More and more manufacturers have become savvy about reaching these lower income consumers who aspire to buy these brands but can't quite yet afford the full size portion. It basically gives them a little taste in the hope of building up brand loyalty.

**Q PET is proving to be such a good material when it comes to packaging sensitive products; have you noticed a shift away from materials like glass?**

**A** *BP:* Definitely. The shift away from glass towards cartons and PET is a global phenomenon. Glass costs more to produce and because it is so much heavier than PET, transportation costs are higher too. There's also the issue of

in-store breakages which can have a big impact on what a brand will choose for its packaging because if a retailer doesn't like the packaging, they can simply de-list you.

*LL:* That said, there will always be a market for glass because it has a certain mark of quality and suits certain products like carbonated water.

**Q Are big beverage companies starting to experiment with their packaging?**

**A** *RH:* In developed markets you are seeing a lot of experimentation because, in terms of volume, these markets aren't growing as much. A lot of manufacturers are looking to give their products 'a premium tag' so they can increase the price.

*BP:* If you're in a market where people are buying products as commodities, day in and day out, they're not really spending a lot of time looking at the brand they're purchasing. So you really have to do something quite outstanding in order to get these sales. In developed markets, there are some very interesting things you can do with packaging and we've seen some big switches, but I think this can be very dangerous. That's why when products like Innocent and Tropicana were launched in smaller PET bottles, they also maintained their gable top packaging because if you change too much, you can turn off your existing consumers. In Hungary, Parmalat launched a liquid milk containing Omega-3. The market there for milk is dominated by cartons,

so what they could have done is, alongside their standard carton, launched another one with different graphics. When you're looking at two things on the shelf and they look pretty much the same but one's more expensive, there's a very high barrier, psychologically, to get over in order to buy that product. So what they actually did was move to a shaped liquid carton. Not a massive difference but enough that it looked significantly different on the shelf and was clearly identifiable as a different product that is not a milk that you buy as a commodity product to put in your tea, but a value-added product that you are buying as a health drink and are therefore prepared to pay extra for.

This is something you are increasingly going to see across beverages. Companies are trying to add value by turning something that's a standard product into a value-added product, and then using slightly different packaging, even if it's just shape or a color that's very unusual for that particular category, to help to differentiate it. ■



Research specialists at Euromonitor International supply Sidel with much of the data and market information it needs to make key strategic decisions both about new technologies and how to react to changing markets. Euromonitor International offers global market intelligence on industries, countries and consumers. It has nearly 40 years of experience publishing market reports, business reference books, online information systems and custom consulting projects.



INTERVIEW WITH  
FRANÇOISE RAOUL-DUVAL

SIDEL'S VICE PRESIDENT FOR SENSITIVE PRODUCTS, FRANÇOISE RAOUL-DUVAL, IS RESPONSIBLE FOR LEADING INNOVATION AND BUSINESS GROWTH WITHIN THIS MARKET SEGMENT.



# STRONG & SENSITIVE

Working with teams of experts based around the world, Françoise Raoul-Duval helps ensure Sidel's customers receive the best tailored solutions for their multiple needs. Here Françoise explains how Sidel strives to be A Better Match for sensitive products.

**Q What is Sidel's overall approach to sensitive products?**  
**A** The term 'product' or 'end-product' refers to our customers' product: the beverage or liquid food. This product is the heart of our customers' business, and therefore ours too. In the sensitive products business, you always need to start with this end product. Understanding its key parameters – ingredients, sugar level, PH level, carbonation, light sensitivity, desired shelf life, viscosity etc. – combined with the customer needs – such as efficiency, simplicity, flexibility and sustainability – will drive you to define the related packaging solutions and line configurations. To answer to specific needs while permanently ensuring a beverage's quality and safety, we deploy a large spectrum of expertise and technologies. Our expertise, for example, covers microbiology, equipment design, material and packaging knowledge, line engineering, etc.

We have especially focused on developing strong aseptic and hot-fill capabilities for products distributed in ambient temperatures to serve the demand from our customers for high-end solutions with lower operating costs. This includes solutions incorporating high production speeds and significant end-product and packaging flexibility.

**Q How do your customers' needs drive this approach?**  
**A** First of all, we always need to consider efficiency issues, because our customers are always seeking to reduce their operating costs. We do this through new products, product evolutions, innovative options and upgrades, maintenance programs, bottle design, line audits and re-engineering solutions. On top of this, our key axes for product development are simplicity; flexibility, with solutions that cater to greater variation of bottle formats and end products

with quicker changeover times; and of course sustainability, with energy and water savings. For the benefit of future customer satisfaction, we also regularly challenge our customers' choices on packaging and filling solutions and strive to innovate.

**Q How do you incorporate food safety into this approach?**  
**A** Food safety is a critical objective for which we accept no compromise. Food safety is in our DNA. It is in the cultural mindset of our employees, from product designers to front line staff, from laboratories to installation engineers. In addition to adhering to local regulations around the world, we work with our customers, our peers and industry associations to reach the highest possible standards of food safety. Sidel has a long history of providing packaging production lines, understanding end-product needs and defining



FRANÇOISE RAOUL-DUVAL, Sidel Vice President for Sensitive Products



“

...THE LEADING  
PLAYER IN  
ASEPTIC PET.

equipment configurations, so we have the experience of aligning packaging solutions while ensuring food safety. This is particularly so for aseptic technology, where we have been providing proven solutions for over 25 years, and have strong experience in microbiology, product-and-packaging interaction and hygienic design.

**Q Can you give some example of the solutions Sidel provides for sensitive products?**

**A** Our Combi Predis FMa and Sensofill FMa lines have proven popular with our customers. Predis, based on dry preform decontamination technology, is unique to Sidel and offers dramatically lower water usage and chemical consumption than wet systems. It also allows our customers to decrease their bottle weight much more than with dry bottle decontamination systems. With over 50 Predis systems now in operation in our customers' plants, this technology is giving beverage players around the world a real edge in terms of lower total costs of ownership and sustainability advantages with significant water and chemical reductions. Predis can be used for aseptic and ultra clean solutions for all types of end products, high or low acid, including UHT milk. Thanks to Predis and our aseptic filler (FMa), Sidel is the leading player in aseptic PET.

We have also developed multiple hot-fill solutions that give our customers greater flexibility in terms of bottle shape and weight, including a new range of filling equipment that offers efficient slurry dosing.

In 2011, such solutions enabled us to reach a high level of customer satisfaction, which is the ultimate indicator of whether our technology is reliable. We have experienced numerous repeated orders and rapid installations – the best rewards we could have expected. It is, however, too early to celebrate. This segment requires humility and hard work. We need to continue to build on our strengths and to listen to our customers' evolving needs.

**Q What key trends are driving how you develop your new products?**

**A** Higher demand for healthier and more natural drinks has increased our customers' needs for aseptic and hot-fill solutions for liquids with larger pulps and particles, such as fruit juices with bigger pieces. This demand started in Greater China and the Middle East historically, and is now rapidly spreading across the world. We recently launched our Veloce ISD hot fill solution, with integrated slurry dosing functionality. This filler, also available as a Combi, provides a much more precise quantity of pulps and

**SENSITIVE PRODUCTS**

A sensitive product is defined as a drinkable product that requires extra special care to achieve its expected shelf-life duration while protecting its quality, taste and vitamins. Sensitive products include juice, nectar, soft drinks, isotonic and tea (JNSDIT) and liquid dairy products (LDP) like fresh milk, UHT milk, flavored milk, drinking yogurt or soy milk. All beverages are sensitive in some way but these product types can more easily suffer changes due to light, oxygen and temperature and are therefore deemed sensitive products.

Sidel combines different methods and technologies for sensitive products: specific product treatments (such as heating), specific filling conditions (such as aseptic, hot fill or ultra clean) to protect the product while it is filled into its package, and specific barrier materials on packaging for products that are sensitive to light or oxygen. The solution is dependent on the liquid food type, the desired shelf life, the packaging shape specifications and the distribution channel (ambient or cold chain). To find out more, please visit [www.sidel.com](http://www.sidel.com).

particles in the final product. It also better protects the product quality, with well over 90% of intact pulps and particles after the filling process. The success of this solution was illustrated during its external validation process in 2011 when a leading global beverage provider validated the technology in just six weeks.

Concerning the sensitive products segment as a whole, we still see emerging markets in Asia, Latin America, the Middle East and Africa as key growth drivers. There has been significant growth in China, Japan, Indonesia and Vietnam for fruit juice, tea and functional drinks. Aseptic and hot-fill solutions are proving increasingly popular in the Middle East and Africa. In Europe, we have seen repeated orders for our ultra clean solutions and especially for our aseptic solutions for juice and UHT milk.

**Q How will you know you have become A Better Match for sensitive products?**

**A** As our customers grow and innovate, we must meet their changing needs. Sidel has all the ingredients to succeed: people with expertise and dedication; portfolio with a wide range of solutions and a strong development pipeline; and passion for our customers' products, needs and solutions.

With three large manufacturing sites in Europe and China, six packaging and tooling centers across five continents, and localized account and project management and services worldwide, we constantly strive to be close to our customers. Being 'A Better Match' implicitly represents our ability to combine our capabilities, expertise and global reach to develop solutions that match our customers' diverse needs and challenges. Only our customers can let us know when we achieve this goal. ■



THINK **GLOBAL**



ACT **LOCAL**

## SAUDI ARABIA

# THE POWERFUL POTENTIAL OF PET

**AUJAN SEIZED THE EXCITING OPPORTUNITIES OF PET TO PRODUCE ITS RANI BRAND ON A NEW ASEPTIC PET LINE WITH COMBI PREDIS/CAPDIS FMA FROM SIDEL.**

For more than a century, Aujan has been a leading provider of fruit beverages throughout the Middle East and beyond. The juice market there is booming, and Aujan is staying ahead of consumer expectations. Its flagship beverage line, Rani, is most notable for its wildly popular Rani Float, which includes chunks of fruit and comes in a variety of delicious flavors. In order to accelerate the ongoing success of these beverages, Aujan decided it was the right time to further capitalize on the powerful potential of PET.

To do so, Aujan chose Sidel to guide them through a major transition, which includes a new aseptic PET line with Combi Predis/Capdis FMA installed

early this year, in contrast to the typical hot-fill technology used for such juices in the Middle East. This new approach will provide Aujan with an extensive range of possibilities for its products, including new sizes and formats (1.5 L, 1 L, 300 ml and 250 ml), new flavors (orange, mango, guava, apple, cocktail, grape juice, carrot and orange), as well as attractive new designs.

#### **A wave of change due to aseptic PET**

Historically, Aujan's individual fruit drinks have been confined mainly to aluminum cans and glass – and recently in PET for some juice products – via hot-fill technology only, which Aujan

considered too limiting in terms of format and design. So, when investing in an innovative aseptic PET line, the packaging opportunities in terms of lightweighting and design were important motivations for Aujan.

The cost of packaging is an extremely critical component that Aujan targeted to optimize by moving towards aseptic PET. But Aujan wanted more and seized the opportunity of the aseptic filling technology to optimize its packaging. Various factors convinced the group to rethink its approach and choose the Combi Predis/Capdis FMA. “Firstly, Predis’ dry decontamination of preforms enables us to lightweight our bottles” states Michel Meunier, Engineering and Project Manager.

In terms of packaging design, the Combi FMA also offers more shape freedom than hot-fill technology. Sidel's packaging-design team played a key role in making sure that marketing and aesthetics dovetail seamlessly with production. Sidel worked closely with Aujan's marketing department and development teams to achieve optimal designs for each product.

#### **Testing interaction between product and packaging**

For some time now, consumers' growing preferences and government regulations have been heading in the same direction: towards more natural and



#### **AUJAN: WELL-POSITIONED AND FOCUSED ON THE FUTURE**

Although Aujan is well-established in Saudi Arabia, that market represents no more than 40% of its production. It is also very strongly represented all across the Middle East, the Maghreb, and Eastern Africa distributing its products in as many as 70 countries. Aujan has factories in Dubai and Iran as well as its head factory in Dammam, Saudi Arabia, where the new Sidel line was installed. In these three factories, Aujan's three main brands are produced:

- › Barbican is Aujan's non-alcoholic beer and a high-growth product in the region. It represents about 20% of the group's turnover.
- › Vimto is both a cordial and carbonated soft drink that's very popular in the region. In fact, it's largely considered “the” drink of the Middle East and the beverage of choice during the Ramadan season.
- › Rani is the driving force of Aujan's portfolio and accounts for half of Aujan's annual revenue. Last year saw an enormous 21% year-on-year jump in sales vs. 2010.



“

THE RIGHT TECHNOLOGY  
WITH THE RIGHT PARTNER.



healthier fruit products, calling for a reduction in the amount of preservatives used. This is why Aujan wanted to develop new recipes that reduce preservatives and incorporate a wide range of natural ingredients into its fruit drinks. It was also looking for smarter, new techniques to enhance quality while also extending the shelf life of its products. “Our products typically last about nine months, but it can take a lot of time to distribute them to their various countries,” explains Michel Meunier. “So, longer shelf life is very beneficial.” Indeed, a major deciding factor for Aujan was Sidel’s ability to evaluate quality, safety and compatibility between its packaging and products, and according to Aujan, Sidel excelled in its role. For starters, the Sidel Product Package Interaction (PPI) team worked closely with Aujan’s various suppliers to conduct vigorous microbiological tests, assist in choosing the most compatible PET resin, and notably, help to select the best additives to optimize oxygen and UV protection. Sidel also helped Aujan develop new recipes that allow it to increase quality and guarantee the longevity of its products. All the shelf-life tests were deployed in real storage conditions. “Every aspect was carefully and thoroughly tested in real-life situations,” explains Meunier. “We’ve spent months on vigorous testing with our own products in our own bottles and with our own caps.” In fact, the MPPI team assisted extensively with everything cap-related too. In addition to rolling out its Capdis system (dry decontamination for caps) on the Combi FMa, they provided a range of consult-

ing services that included implementing quality protocols and testing multiple molds to ensure perfect compatibility between the bottles and caps.

**Aseptic filling: the right decision**

In order to produce the diverse bottle formats that consumers want, aseptic technology was a must. For Aujan, aseptic isn’t merely an added dimension to its processes. In fact, it plans to progressively phase out its hot-fill production completely. According to Michel Meunier, in addition to the obvious cost-saving motivations, the key reason behind this full transition is the technological benefits that aseptic offers, and more specifically with Sidel’s unique aseptic Combi Predis/Capdis FMa. First, it reduces water consumption, which is a significant benefit in a dry desert region like Saudi Arabia. Aujan also considered that Sidel’s aseptic PET line offered the most attractive benefits thanks to its simplified design and operation and easier maintenance and cleaning. Likewise, the rapid format changeovers offer the ability to alternate flexibly between multiple formats and flavors while reducing operating costs. But more important was Sidel’s overall expertise. “If you don’t know what you’re doing, aseptic can be complicated. That’s why a lot of companies stick to hot-fill,” says Michel Meunier. “But with the right partner, there are a lot of great possibilities. Sidel is aware that our success is theirs too, so it’s really a win-win situation for everyone.” Despite the typical investment concerns, Meunier says there was no major trouble convincing anyone at Aujan to

move to aseptic. “We conducted a lot of feasibility studies as well as cost-efficiency analyses, and everything reconfirmed that we must move to this technology,” Meunier continues. “We’ve made a significant investment here, but it was well worth it. Today we’re very confident that we’ve made the right decision.”

**Reliability after the roll-out**

To ensure a smooth transition, Aujan will continue benefiting from Sidel services well after production begins. During the first six months, Sidel technicians will be on site in order to maximize uptime and make sure everything is running smoothly. Aujan’s technicians also benefited from aseptic training sessions with Sidel experts to ensure successful operation of the new PET line. Furthermore, Aujan will be using Sidel’s new Efficiency Improvement Tool (EIT), an intelligent software solution that tracks and measures line-based consumption stats and is expected to help Aujan optimize energy while increasing productivity by 2%.

“We’ve got a lot to look forward to in 2012,” Meunier exclaims, “the right technology, the right partner, a great new level of flexibility, and an improved product heading to the market!” ■



IRAN

REAL FRUIT  
JUICE IN  
A MINUTE

SIDEL TECHNOLOGY SUPPORTS FIRST-EVER  
LAUNCH OF A PRESERVATIVE-FREE 100% JUICE  
PRODUCT IN PET BOTTLES.

The juice market has grown rapidly in Iran. But until now, consumers looking for 100% fruit juice without preservatives have had to settle for boxed juice only. In an effort to stand out from its competitors, Khosghovar, the country’s largest bottler of carbonated beverages, decided to introduce Minute Maid fruit drinks to the Iranian market in PET bottles. They purchased a Sidel aseptic filling line to make it happen. Although Khosghovar has long been recognized as Iran’s market leader in drink manufacturing, this Minute Maid launch marked the company’s first venture into the juice market. The aseptic line validation was successfully approved based on very demanding client protocols, and it will reach speeds as fast as 25,000 bph. The new products were introduced in 300 ml and 1 L bottles in multiple flavors including orange, peach, 100% apple and sour cherry. The sports drink Powerade will be launched shortly as well. ■



IRAN

# PREMIUM DOUGH

IN IRAN’S SECOND LARGEST INDUSTRIAL CITY, MASHHAD, BAHAR ROSE INVESTED IN A NEW PREDIS/CAPDIS FMA LINE FOR ITS KEY PRODUCT, DOUGH.

Dough is a hugely popular drink in Iran. Made from a mixture of milk, water and salt it can be found in many guises across the Middle East. A major producer of Dough, Bahar Rose is currently number two in the Iranian drinks market, with a 40% market share, and Dough is its number one seller. Until now, Bahar Rose had been producing Dough on a non-aseptic line. It decided to invest in a new line to improve the recipe, create a more natural product and enlarge its milk-base range that requires aseptic filling.

**An aseptic line for Dough and UHT milk**  
Dough is produced with milk serum, water and salt, which acts as a preservative to improve shelf life. Bahar Rose wanted to reduce the amount of salt it was adding to Dough resulting in a more natural product without any impairment to the flavor or shelf life. To do so, it decided to invest in an aseptic Combi Predis/Capdis FMa line housed in a brand new dedicated plant in Mashhad, North Iran. This new line allows Bahar Rose to reduce the salt levels, beneficial for all consumers’ health, and as it guarantees complete sterility, there is no chance of pollution.

Moreover, Bahar Rose is looking to expand its current range of beverages to include ‘milk-flavored’, ‘milk-juice’ products and UHT milk. It has been estimated that the new line will result in approximately 100 million bottles filled each year.

**Learning from experience**  
A lot of preliminary research has gone into this important investment in the Combi Predis/Capdis FMa. Bahar Rose decided to see Sidel’s similar aseptic lines in action and traveled to Germany to see an existing line that Sidel installed. The ability to see the line and gain feedback from those already using it proved invaluable in the decision-making process. The initial order was placed in May 2011 and the new line is due to be delivered in March 2012, followed by training of the specialist technicians before the launch of the line in June 2012.

**Design matters**  
Alongside the engineering and aseptic technologies, Sidel also worked with Bahar Rose on its bottle design. Bahar Rose wanted an attractive bottle that would stand out in the market place. It also needed the logo on the shoulder of the bottle and a ‘suite’



Bahar Rose Chenaran was founded in 2009. It manufactures and provides milk products including pasteurized milk, flavored milk, cacao milk, various yogurt, cream, pasteurized cheese and different kinds of juice. Bahar Rose Chenaran is one of the companies that manufactures its products under the Aliss brand along with Cheshme Nooshan Khorasan, which produces soda, mineral water and dough and Nik Rose Chenaran, which produces beer.

of bottles in different sizes. Sidel carried-out all the packaging design and the result is a family of bottles that have a distinctive look and reflect Dough’s positioning as a premium product. The full commercial launch is expected mid-2012. ■

SAUDI ARABIA

# JUICY AMBITIONS



HANA WATER, SAUDI ARABIA’S LEADER IN BOTTLED WATER, IS MAKING A BOLD MOVE TO JUICE AND TRUSTED SIDEL TO DEVELOP THE PERFECT TECHNOLOGICAL FIT FOR THIS SENSITIVE TRANSITION.



Although long considered the water specialist in Saudi Arabia, Hana Water recognized the rapidly expanding demands on the beverage market for juice products. They decided it was time to get in on the action. Because this will now require packaging more-sensitive products, they needed to be certain to apply the most-adapted technology and service solutions possible. Hana Water originally had a preference for hot-fill technology since it’s the most traditional approach and largely considered the easiest to implement. But they ended up looking at the bigger long-term picture and worked with Sidel to weigh all their options. The group was no stranger to Sidel. For years, Hana Water has benefited from complete line solutions by Sidel, and they currently use Sidel blow-molding technology on as many as eight of their lines. They ultimately realized that the best fit for them would be aseptic technology and opted for an aseptic PET line with Combi Predis FMa from Sidel.

**A refreshing market opportunity**  
Just how big is the juice market in Saudi Arabia? According to Ahmed H. AL Theyab, Managing Director at Hana Water, consumers will drink 1.14 billion liters of juice this year alone. That’s a huge opportunity for local drink manufacturers. “Currently, close to 70% of the GCC (Cooperation Council for the Arab States of the Gulf) market is covered by 65 Saudi-based bottling factories, which distribute up to 6.5 billion liters per year,” AL Theyab explains. When embarking on such a major endeavor, it certainly doesn’t hurt to be a respected name in the region. “After more than thirty years as a leader in water, we acquired a great deal of expertise, an excellent reputation, strong links with our customers, and the financial force necessary to enter into the beverage business,” AL Theyab continues. “We see this transition to juice as a multi-phase approach.” ➤

**ABOUT HANA WATER**  
More formally known as the National Plant for Healthy Water, Hana Water was established in 1981 when the group began tapping local fresh underground wells. Hana Water quickly evolved into the undisputed water specialist in Saudi Arabia as well as a market leader throughout much of the region. Today, Hana Water is the largest mineral-water bottler in Saudi Arabia and the United Arab Emirates. As a member of the International Bottled Water Association (IBWA), Hana Water uses some of the most advanced production technologies in the industry, and its production lines are among the largest in the world.





The first phase will be fruit drinks and ice tea, followed by a gradual move to nectars, then flavored milk, smoothies and finally, 100% fruit juices with a core concept of zero preservatives. All of their recipes will comply with the highest standards and food regulations, which have become increasingly strict in Saudi Arabia.

**Important decisions to make**

The biggest challenge of all was to decide what kind of production line was most adapted to their needs and ambitions. Hana Water trusted Sidel to help them find the best answer. Their decision to choose the aseptic Sidel PET line with Combi Predis FMa was driven by multiple factors. For starters, Hana Water was interested in the environmental benefits of applying dry-decontamination technology to its processes. This helps to reinforce their position as a truly responsible and innovative company: the Predis system uses no water and very few chemicals, reduces energy consumption, minimizes floor space and helps to lower maintenance costs. It will also give the possibility to deploy innovative bottle designs as Predis offers full freedom of bottle shape: a good opportunity for Hana Water. They want to position their new product in the Premium range, so they’re going to make sure it arrives on the market with the perfect image. That will include an attractive bottle and a full-sleeve label, which is ideal for marketing. Sidel

worked with Hana Water to establish their primary orientations regarding bottle capacity. The choice was made to introduce 250 ml and 1 L bottles. Down the road, they may eventually expand to a 300 ml format as well.

First-hand proof offered an added layer of confidence. Hana Water had the opportunity to visit other Sidel clients in France, Poland and Germany who are currently using aseptic technology. These up-close experiences helped to reassure Hana Water that aseptic technology was truly the right way to go.

**Lightweighting and long shelf life**

Lightweighted bottles compared to traditional hot-filled juice bottles were also a key factor. Water was the first food-liquid segment to apply bottle-lightweighting technology and Sidel provided its lightweighting know-how to Hana Water in the past for water bottling. So they welcomed the possibility of achieving similar success this time around. Shelf-life was another critical issue. Hana Water wanted to be able to produce longer-life products with, eventually, no preservatives because government regulations have become strict regarding their use. They knew that achieving these goals would mean embracing aseptic technology over hot-fill. “Conventional hot-fill systems can have a bad effect on package quality due to deformation,” says Ahmed H. AL Theyab. “But if we can offer a product in an attractive, elegantly designed bottle

“

**BUT IF WE CAN OFFER A PRODUCT IN AN ATTRACTIVE, ELEGANTLY DESIGNED BOTTLE WITH A SHELF LIFE OF NINE MONTHS, AND WITH THE ADDED VALUE OF ZERO PRESERVATIVES, THEN THIS IS SOMETHING CUSTOMERS WILL BE ATTRACTED TO.**

with a shelf life of nine months, and with the added value of zero preservatives, then this is something customers will be attracted to.”

**Building everything from scratch**

Hana Water had their work cut out for them. As they were totally new to the juice world, they had to develop everything completely from scratch. That even meant building an entirely new production facility specifically for this new aseptic line. The facility is designed to host seven lines in all, including three aseptic lines, three box lines and a can line. Throughout this construction phase, Sidel worked closely with Hana Water to choose the best filling technologies and the best consumables related to bottles and caps, and showed them how to guarantee optimal sterilization of both the product and container. Additionally, Sidel’s experts were helpful in the various engineering aspects of the production area. For instance, they provided advice on the general environment conditions, like proper lighting, air treatment to ensure quality filtration, and temperature control to prevent critical areas from getting too hot. Sidel also made recommendations regarding ground quality, such as what angles were necessary for the proper flow of liquids. And they instructed on what types of treatments to apply to chemical products for recycling as well as how to best store raw materials.

As this was a multi-partner mission, Sidel coordinated and cooperated seamlessly with other suppliers on the line, including Tetra Pak for process control and piping. “With such a huge transition like this, having the combined expertise of Sidel and Tetra Pak was very valuable, especially on issues like closure and bottleneck finish, material distribution, oxidation prevention and overall output efficiency,” explains Ahmed H. AL Theyab. “Now we will achieve optimal protection for our preservative-free juice products, and up to nine months of shelf life in local-environment conditions.” And to guide Hana Water smoothly from planning to deployment, Sidel will be providing extensive on-site training sessions for the technicians and operators. Hana Water ordered the first aseptic line in mid-2010. The equipment was delivered by October 2011, and production is expected to begin during the first half of 2012, as soon as the construction of the facilities is finished. ■

FRANCE

FOR OVER A CENTURY, LSDH HAS ALWAYS KNOWN HOW TO REINVENT ITSELF. ITS THIRST FOR CHALLENGES AND INNOVATIONS HAS MADE IT ONE OF THE LEADERS ON THE FRENCH FRUIT JUICE MARKET. IT'S A STRATEGY THAT SIDEL GREATLY CONTRIBUTES TO.

When founded in 1909, Laiterie Saint-Denis-de-L'Hôtel (LSDH) was a company of dairy farmers who wanted to pool their production equipment in order to deliver their products to the main centers of consumption in France's Loiret region. Since the beginning, the vocation of LSDH remains unchanged. As its CEO Emmanuel Vasseneix says, "We are living in an affluent society today, but let's not forget that just 60 years ago people were dying of hunger in our country." This is why LSDH offers a full range of drinks, so that each morning people will find, in their refrigerators or on their tables, all the products they like to eat or drink. Today the company bases its image on four major ambitions: nutrition, innovation, naturalness and sustainability.

Betting on "all food liquids"

The implementation of milk quotas in 1984, aimed mainly at stopping surplus milk production, was a turning point in the development of LSDH. The quota policy had the immediate effect of putting two-thirds of milk producers out of business. Die out or leave? LSDH opted for a more original path and decided to use the technologies and packages intended for milk production in order to diversify and bottle all other food liquids. That is how this dairy company turned to bottling fruit juices, plant-based drinks, diet products and high-protein drinks.



Farmers from La Beauce

It's a challenge that LSDH is facing now more than ever: "With 150 new references released in 2011, and most likely the same number in 2012, as well as 50 new recipes on average each year, our keen desire is to offer our customers a highly diversified range of products." It's a case of sustained development through external growth.

An essential partner for big-box retailers

As the company has evolved and diversified, relations with large retailers have been an essential focus. An example is the collaboration with Carrefour, >





LSDH IN NUMBERS:

- > 900 employees
- > 4 production sites
- > 1.2 billion packages
- > €500 million in sales
- > 150 million bottles per year:
  - 100 million bottles for milk
  - 50 million bottles for juice



a loyal customer for 30 years and for whom LSDH currently produces 50% of its fruit juices, both discount labels and house brands.

Another significant example is the collaboration with the Système U Group, with whom LSDH launched the first PET milk bottle with no sealing foil, as well as the organic milk bottle, both of which were bottled on a Sidel aseptic line at the Varennes-sur-Fouzon site. LSDH thus provides close support to major retailers, who are in a very competitive market and are very demanding in terms of innovation, quality and responsiveness. “Today, it’s no longer enough to make the world’s best product in the most beautiful package. You also have to be able to perfectly control product quality and distribution, essential criteria for which major retailers are pushing us towards excellence. Before, we were just the little engine that could. Today, we’ve become references in the packaging of food liquids!”

**Sidel in the service of innovations**

Above and beyond product diversification, LSDH has invested large sums to broaden its range of packaging: cardboard, glass and then plastic. It constantly works on new packaging concepts in order to anticipate the future



needs of consumers. With 2,000 SKUs, 1,400 raw materials, more than 1,700 different patterns and production of about 1 billion packages, the ambition of LSDH is still “to be a machine for launching new products.” This diversification relies on state-of-the-art technologies. “Our sites are and will always be perpetually evolving, since our customers’ demands are changing constantly. To respond to these new needs, we turn to partners like Sidel for innovative technologies such as Combi Predis FMa.” In over 20 years, LSDH has invested more than €150 million, including €50 million during the past three years. Today, the production lines are saturated, and this is why LSDH is starting a new €60 million investment program, including two new Sidel aseptic lines equipped with the Combi Predis/Capdis FMa.

“With these medium- and low-speed lines, we will offer retailers a kind of industrial laboratory. They will be able to entrust us with the launch of new products and new recipes and to focus on the marketing of their brands.”

**Dry decontamination of preforms: A daring challenge**

Starting in 2007, LSDH made a daring decision: to purchase a line equipped with the Combi Predis FMa from Sidel. At the time, this revolutionary technology for the dry decontamination of preforms enabled LSDH to bottle UHT milk aseptically in a lightweight, two-layer PET bottle with no sealing foil – a world’s first. This bottle proved very popular and was recognized by a dozen awards, such as the Regional Innovation Trophy. In addition to the simplicity of use and performance of the Combi Predis FMa, it was also the opportunity for savings that convinced LSDH that this investment was well-founded. It resulted in a decrease in the quantity of plastic thanks to lighter bottles, no water consumption, a sharp decrease in the amount of hydrogen peroxide used and therefore a drop in the effluents sent to the waste treatment stations. As Emmanuel Vasseneix explains enthusiastically, “the work performed jointly by our two companies immediately bore fruit. Compared to a standard machine, we cut our overall water consumption by a factor of three for all of our production facilities.”

“We also lightened our one-liter bottle by 4 g: initially produced at 32 g on an aseptic line with wet decontamination of bottles. It now weighs 28 g, and the goal is eventually to get it down to 24 g. A fantastic wager! Coupled with reduced maintenance and faster output, this innovation has led to the creation of jobs at the Varennes-sur-Fouzon site. Sidel has a pearl in its hands!”

**Social and environmental responsibility: A philosophy**

The product is at the heart of the strategy, but that’s not all. Environmental and social values are also essential for LSDH. The company is seeking to

minimize its environmental footprint and stop depleting fossil resources. This desire is translated into highly concrete actions, such as replacing fuel oil boilers with gas boilers or putting waste treatment systems in place.

Another project involves the lightweighting of PET containers and using up to 25% recycled materials. Its main theme for social responsibility focuses on strong values: passion, ambition and humanity. “To do things well, you need motivated men and women who are fulfilled by their work environment. We want to develop our employees’ sense of curiosity and encourage them to challenge themselves and to keep growing at all times. Daring to innovate, daring to find new challenges, daring to think outside the box – that is an extraordinary motivation for our teams.” Socially, LSDH is multiplying its initiatives in several different areas: building schools in the tiny village of Akpakli in Benin so that the village children can get an education, sponsoring sports clubs, donating to non-profit associations, performing humanitarian actions with other companies, or climbing Mount Kilimanjaro as a team.

**Expansion beyond France’s borders**

In a wider process, the goals of LSDH go well beyond the French market, which is showing signs of declining growth. Thanks to its involvement in various raw material sectors, such as soy, milk, apples and oranges, the Group intends to expand its business into other countries and also get a foot into production. “We are convinced that the technology and know-how we have been able to deploy on our production equipment can now be exported and put to use in markets outside France.” In the company’s sights are the German and British markets, both of which are growing and seeking added value. ■







SWITZERLAND

# WITH AND WITHOUT FRUIT

**WHEN THE SWISS DAIRY COMPANY EMMI WAS LOOKING FOR A 2-IN-1 MACHINE ABLE TO PRODUCE BOTH ITS YOGURTS WITH AND WITHOUT LARGE FRUIT PIECES FOR ITS WELL-KNOWN TONI YOGURT, IT KNEW WHO TO TURN TO.**

The latest generation of the gravimetric machine from Hema – part of the Sidel Group – combined with the proven volumetric piston technology, enabled Emmi to choose the right investment to produce its bi-phase Toni yogurts. It was the best of both technologies, providing some extremely competitive advantages: the volume-based dosing of yogurt with fruit pieces through the volumetric filler as well as the weight-based dosage for thinner product with the gravimetric filler. Since the beginning of 2011, this flexibility has enabled Emmi to simultaneously handle the production of its traditional mono-phase products, accounting for the majority of the company’s sales while

producing bi-phase products on the same filling machine. Expanding the existing 19 flavors, there are four bi-phase recipes with 100% fruit, no preservatives, no artificial colors or flavors: cherry-chocolate, raspberry-natural, apple-cream caramel and strawberry-vanilla. ■

*In an independent test of the German Stiftung Warentest in June 2011, swiss yogurt was the clear winner in a field of 25 tested strawberry yogurts. An undoubted success!*

FRANCE



**A YEAR AFTER PRODUCTION START-UP, THE FIRST RESULTS ARE IN FOR REFRESCO FRANCE’S LATEST ASEPTIC PET BOTTLING LINE, INSTALLED AT ITS SAINT-ALBAN-LES-EAUX PLANT, FOR TEA-BASED DRINKS. IT’S A REVOLUTION IN TERMS OF DRY DECONTAMINATION.**

The Refresco Group produces and bottles refreshing non-alcoholic beverages, such as sodas, fruit juices, flavored water and mineral water. Equipped with eight aseptic lines in all, its three production sites – Délifruits, Nuits-Saint-Georges and Les Eaux-Minérales-de-Saint-Alban – are the showcase for this European group’s core activity: aseptic PET bottling. And the latest Sidel aseptic line, started in 2011 at its Saint-Alban plant, has placed the bar very high in terms of performance and efficiency.

**A proactive company**  
Indisputably high product quality and service levels are the golden rule for Refresco, which aims to serve major retailers and brands. The company puts innovation and development at the center of its strategy. Proactive support to help conceive new recipes or new packages that are reliable, profitable

and sustainable for sensitive products is a decisive factor for Refresco. An example is the launch of aseptic bottling for carbonated drinks in 2010. As Frédéric Thoraval, Industrial Director at Refresco France, explains: “With this new development, our ambition is to promote and energize preservative-free carbonated drinks for retailers’ house brands and for the hard discount market.” Furthermore, the logistics platform at its Saint-Alban site enables Refresco to store more than 50,000 pallets each year, whether they come from that production site or from one of the other plants, with a view to distribute throughout France.

**Aseptic PET: A religion**  
The technological choice in favor of aseptic bottling in PET started in the late 1990s, at a time when it was not yet fully mastered. PET ensures high quality for

cold bottling, particularly with fruit juices. For an industrial company, “PET makes sense only with aseptic bottling,” comments Frédéric Thoraval. “Hot filling doesn’t make sense from an energy or money standpoint, since it requires more PET material in the bottle. The development of aseptic technology, combined with the growth of PET and recycled PET – versus other materials such as glass and cartons – shows that there are great opportunities for future innovations in the field of sensitive products.”

**Flexibility: A response to the marketing needs of brands**  
Already convinced by the benefits of aseptic bottling, Refresco is looking to innovate in this field. That’s why it has chosen Sidel’s Combi Predis/Capdis FMa. For a large company, this integrated blowing-filling-capping system, which requires no air conveying, ➤





In late 2011, Refresco France and Sidel received First Prize in the “Economical and Clean Technologies” category at the French government’s Prix Entreprises et Environnement (Business and Environment Awards).



provides “a distinct edge in terms of floor space used. Maintenance is also greatly reduced, because there is no conveying and the number of moving parts is limited. The Combi responds to our need for innovation and optimization.” Above all, this bottling line has enabled Refresco to increase its production volumes. After one year entirely devoted to the bottling of tea-based drinks in different formats – 1 L, 1.5 L and 2 L – this line is now also used for fruit juices, thanks to an optimized schedule. The end of line includes a double palletizing island to ensure even greater flexibility for palletization. “Our line is equipped with two Sidel robotized end-of-line alternatives. They group bottles into batches of 2, 4 and 6, into four-packs with or without handles or into bulk pallets or half-pallets. Today, this flexibility is indispensable to satisfy market demands and serve our customers as best we can.”

**A 100% dry Combi**

With the start-up of this new bottling line in 2011, Refresco has gone all in with 100% dry aseptic bottling. This acquisition is based on experience with the aseptic line at the Nuits-Saint-Georges site, which was installed a year before and which also includes a Combi Predis/Capdis FMa with dry decontamination for preforms and caps. Similarly, Refresco wanted to make its technological leap forward complete at the Saint-Alban site, abandoning wet decontamination for cap sterilization. “There was no reason to go with dry aseptic for bottles and keep a wet treatment for caps. We wanted a 100% dry Combi,” explains Frédéric Thoraval. “Dry decontamination is the best technology available on the market right now, and it’s particularly suited for sensitive products like iced tea. Compared to conventional wet decontamination systems, it has the advantage of requiring no water infeed. With this line, the use of sterilizing agents has gone from 42 tons of peracetic acid to just 6.7 tons.”

**One year of production: Positive results**

One year after its start-up in March 2011, the results have been positive. “The line is still being ramped up.” It runs 24 hours a day, six days a week. The production cycle times have been validated up to 120 hours between two cleanings. Technical staff reacted very favorably to this line. They have also received training to help them optimally use this new industrial tool, which has proven to be innovative in many respects. “At start-up, we also capitalized on the skills of staff who



worked on the aseptic line in Nuits-Saint-Georges. Today, feedback from machine start-up and operation has been very good. This technological leap forward has been a real revolution for our staff, who are gaining skills and know-how.”

**Sustainability: A decisive factor**

It shouldn’t be forgotten that this investment also responds to Refresco’s sustainability goals, which lie at the heart of its policy and its strategy. All of the company’s developments take into account this dimension, which is perfectly compatible with performance and profitability. “Thanks to Sidel’s Combi Predis/Capdis FMa, we have cut our energy consumption by 30% versus a traditional aseptic line.” Product quality remains a priority at each step of the process, without compromising the environmental and economic benefits at any time. Furthermore, the bottles produced on this line contain 50% recycled PET. Thanks to all of these innovations, Refresco saves more than 1,700 tons of CO<sub>2</sub>, 38,000 cubic meters of water, 2.5 million kWh and over 400 tons of virgin PET each year. ■

SPAIN

# PREVENCIÓN DE PACKAGING

PULEVA SPAIN PRODUCES ITS NEW PASTEURIZED MILK ON A SIDEL ASEPTIC LINE.

In 2011, Puleva Spain launched its pasteurized milk on the Spanish market, thus expanding its range of UHT dairy products to fresh milk. Packaged in a 1.5 L bottle, this pasteurized milk is produced on one of the two aseptic lines equipped with a Combi Disis installed in 2000 and 2005 at Puleva’s Granada plant. This Combi Disis is an aseptic solution incorporating blowing, filling and capping and is based on the dry decontamination of preforms. When it was implemented 10 years ago in Puleva, this technology was considered revolutionary in pioneering the decontamination of the preform, rather than the bottle, thereby eliminating the consumption of water and chemicals. This technology continues to give satisfaction to Puleva as it handles the sterility aspects of several UHT dairy products that are packaged on these two lines: flavored milk, vitamin-enriched milk and now pasteurized milk. These categories of milk are marketed in various formats (175 ml, 250 ml, 500 ml, 750 ml and 1.5 L), and in various shapes: square or cylindrical, transparent PET or white PET bottles. ■





MEXICO

# THE MOST ADVANCED BLOW-MOLDING TECHNOLOGY

**ALPHA CHOSE SIDEL TO SUPPLY 11 SBO UNIVERSAL2ECO MACHINES AND 1,200 MOLDS AFTER WINNING A SIGNIFICANT NEW CONTRACT WITH ARCACONTINENTAL.**



In Mexico, a major bottle manufacturer, Alpha, won a very competitive bid to supply empty bottles to ArcaContinental. The contract will guarantee the supply of 900 million bottles every year over the next eight years for Alpha. To meet this new contract, Alpha turned to Sidel to supply 11 SBO Universal2eco blow molders and 1,200 molds – the most important order ever in record time for Alpha. The large order was placed with Sidel in August 2011 and, with shipments taking place between November 2011 and February 2012, the new machines are due to be installed in six plants across Mexico and operational by April 2012.

**The right mix between inline and offline operation**

Alpha won over its competitors because “we understood exactly the needs of our customer, ArcaContinental, and we found the right mix between inline and offline operation,” describes Martin Stark, Technical and Purchasing Director at Alpha. By joining ArcaContinental in its facilities, Alpha is producing most of the volumes of the bottles inline, and managing the small volumes of bottles within an offline production hall where it is doing palletizing as well. This operation scheme is completely different from the previous system, which was nearly fully “offline.” A win-win compromise that avoids any logistics and shipping operations and their respective costs, optimizes the delivery time and reduces the expensive stocks of empty bottles and limits physical constraints on the empty bottles due to shipping, guaranteeing the bottle quality at the end.

**Successful relationships**

Alpha has worked with Sidel since 1986 when Alpha produced edible oil in Germany. During this time, both companies have seen changes and developments in PET technology and

its uses as well as evolutions in the companies. “We believe that Sidel is once again catching up and leading in blow-molding,” adds Stark. In the last three years, Alpha agreed to field test Sidel’s latest blowing innovations. It experienced the SBO 20 Universal2eco at 2,200 bottles per hour equipped with the optimized oven configuration of the Ecoven. By decreasing the number of lamps per module as well as the number of heating modules, it leads to a 43% reduction in the installed electrical power. “The Ecoven enabled us to save between 25% to 35% in energy consumption,” comments Stark. Alpha also tested and adopted Bottle Switch, the Sidel-patented quick format changeover system which improves machine flexibility by reducing mold changeover time to less than a minute. It decreases machine downtime by 50% and therefore improves TCO. “While testing the SBO 20 Universal2eco, we also saw the advantages of using the Bottle Switch, an easy-to-use system with no tools, key for us as we have many different shapes to produce on a single machine.”

**Advanced technology**

The 11 SBO Universal2eco blow-molders that Sidel is providing are equipped with 6 to 26 cavities and will run up to 2,200 bottles per hour and all benefit from the most advanced technology and the very highest specifications, including the Ecoven and Bottle Switch. These benefits are passed on to Alpha and will enable the company to meet ArcaContinental’s expectations.



“

**WE BELIEVE THAT SIDEL IS ONCE AGAIN CATCHING UP AND LEADING IN BLOW-MOLDING.**

“The evolution of the SBO Universal technology as well as the fact that we field tested the SBO 20 Universal2eco running at 2,200 bph, which is now in operation since mid-2011, gave us the confidence that it was the right technology to produce the bottles in the ArcaContinental corporation as planned.” The new blow molders will produce all the Coca-Cola bottle shapes, from 250 ml to 3 L, and each machine will be able to produce 21 different shapes and sizes which is why Bottle Switch is critical to ensure there is no loss in productivity. The 1,200 molds ordered by Alpha are equipped with Kohlox. The Kohlox system is made from a thermo composite material, which helps parts move freely without lubrication – by removing the need for regular greasing of blow molds, the associated ‘downtime’ is reduced.

**A real vote of confidence**

Placing such a large one-off order was a real vote of confidence for Sidel. It’s a significant deal: “the most important order we ever placed to a supplier,” according to Martin Stark. “Sidel having a good presence in Mexico, combined with the capability to install the equipment in several locations simultaneously – which is necessary as the timing for the installation is quite tough – really made the difference for Alpha in selecting Sidel as its partner for such a deal.” Alpha, within its own organization,

also benefits from experienced and skilled technicians, which allows it to be more independent and flexible in the start up. This is also due to the experience Alpha had with the field test on the SBO 20 Universal2eco that it purchased in advance, before getting the order from ArcaContinental. As with any large deal, a number of manufacturers were evaluated alongside Sidel. Each was judged on the best Total Cost of Ownership (TCO), which was one of the main drivers. Furthermore, as Stark explains, “we have a lot of experience with Sidel in Mexico and the fact that Sidel has a strong organization in this area was essential to us and, in case something unexpected happens, we can benefit from very fast and quick solutions in terms of spare parts and technicians. This we could not get from other suppliers for the same technology.” ■



MEXICO

IN LESS THAN TWO YEARS, MEXICO’S JUGOS DEL VALLE INVESTED IN TWO NEW SIDEL HOT-FILL COMBIS IN ORDER TO PRODUCE POWERADE AND A READY-TO-DRINK TEA IN MULTIPLE FLAVORS.

DOUBLE EQUIPPED

Expanding production is serious business that requires serious reflection. So when people at Jugos del Valle decided to buy a new production line, they methodically mapped out all their precise requirements and carefully assessed what they wanted to achieve. “We analyzed all the plans we received from our various suppliers and, in the end, what Sidel offered was really the best fit for our needs,” explains Alejandro Malagón, General Director. After validating production for the first Sidel hot-fill Combi in July 2010, the group followed up with a similar investment shortly after. Together, Jugos del Valle’s two hot-fill Combis are now producing Powerade (Isotonic) and a ready-to-drink tea in various formats, including 500 ml, 600 ml and 1 L PET bottles. “Consumer lifestyles and demands are rapidly evolving here in Mexico, and we’re constantly striving to satisfy them,” Malagón continues. “That’s why we felt it was important to invest in these lines.”

Less expense, more efficiency

For the first time, Jugos del Valle preferred an integrated system like Sidel’s

Combi equipment, which combines blow-molding, filling and capping into a single high-performance solution. This all-in-one approach now eliminates conveying as well as handling, accumulation and storage of empty bottles. It also helps to reduce the number of machines, to increase package hygiene, and to improve overall production reliability. Of course, transitioning from stand-alone lines to the new Combi systems required some training to help equipment operators get the most out of them. But Malagón insists that the efficiency benefits will far outweigh the learning curve. “A solution like this helps us reduce costs,” he says. “We no longer have to deal with transportation costs for the bottle, because now it arrives without being transformed. This also allows us to make it slightly thinner, which helps reduce costs even more.” The choice of the filling technology was strongly influenced by the intrinsic properties of the beverages, which require special care to ensure total safety and product integrity. Along with optimized processes and high speeds, risk-free production was of the utmost importance to Jugos del Valle.

**JUGOS DEL VALLE**  
With over 60 years of history, Jugos del Valle is Mexico’s leader in ready-to-drink juices and juice drinks. It is strategically partnered with Coca-Cola, a total beverage company, offering over 60 brands in Mexico, where it’s the leader in teas and carbonated soft drinks, number two in sports drinks, and number three in bottled water and energy drinks.

Ready to shift into high gear

Jugos del Valle implemented specific production plans to make its lines as efficient as possible. In order to maintain optimal inventory levels, both lines are running all week long. And despite regular changeovers and varying production rates between different products, they have been able to achieve optimal efficiency. In fact, the Combi can reach speeds as fast as 36,000 bph, perfectly adapted to Jugos del Valle’s specific requirements. “Since this is a relatively new technology for us, we have some improvements to make in order to reach the desired performance,” explains Malagón. “But we are certainly on track to achieve it.”

The right partner to make it all happen

Backed by its solid industrial expertise, Sidel was able to help Jugos del Valle master the complexities typically associated with hot-fill production, such as the collapsing of packages and to define the most-adapted bottle process possible. “Benefiting from the competence of Sidel’s experts for our process is always helpful,” Malagón insists. “Sidel has



become our business partner, bringing us experience, knowledge and technical expertise, therefore making the whole process a lot smoother.” Jugos del Valle aims to continue building fruitful alliances with suppliers and business partners that generate tangible

benefits, both technological and economical, in order to gain competitive advantages and continue leading the way in Mexico’s non-carbonated beverage market. ■

# QUALITY FROM THE OUTSIDE IN

## THE NEW DISTINCTIVE LOOK OF PENTA WATER BOTTLE REVAMPED BY SIDEL GIVES THE RIGHT LEVEL OF VALUE TO THE QUALITY OF THE PREMIUM WATER INSIDE.

Penta Water Company, located in Colton, California, produces an ultra-purified drinking water that provides advanced hydration, purity and great taste in every bottle. Penta Water is the best selling bottled water in the U.S. Natural Channel. Penta decided, after careful consideration of its current packaging, that the brand needed a new look. It was determined that the brand needed revamping to differentiate it from other premium bottled waters and to be more appealing to consumers. To do so, there was no doubt to ask for Sidel's expertise in designing a new bottle.

**A new look for Penta Water**  
According to Charles Soderstrom, owner and CEO of Penta Waters, "Our vision is to build the brand by introducing a new look, one that is repre-

sentative of Penta's time-honored tradition of delivering great taste, ultra-purity and Advanced Hydration." Penta Water turned to Sidel to redesign the bottle for its brand. Mr. Soderstrom has worked with Sidel over the years on several other projects. Soderstrom says, "I had the opportunity to visit the Sidel Blow Molding Manufacturing Facility in Northern France two years ago. There was no question in my mind that Sidel had the expertise and ability to deliver a unique bottle design; however, we were not quite ready to begin the project then." During the Summer of 2011, Mr. Soderstrom visited the North America Packaging and Tooling Center located in Atlanta, Georgia to initiate the process of developing the new look for Penta. "The Sidel team

### WHAT MAKES PENTA WATER SO UNIQUE?

Penta, the purest-known bottled water on the market, uses a 13-step / 11 hour purification process that includes a patented physics process. Penta's patented process not only purifies the water, but actually gives Penta the unique micro-clustered properties that help the body to function more efficiently. It is estimated that the human body consists of between 50 and 75 trillion cells. In 1992, it was discovered at John Hopkins University that these cells hydrate through tiny protein channels called aquaporins. These aquaporins are the gateway to the cell and will only transport pure water molecules. Minerals slow down and can even inhibit the cellular absorption of water, which is why Penta's unique ultra-purity and micro clusters make it easier for water molecules to hydrate human cells. Penta provides Advanced Hydration.

took the time to ask the right questions, they listened very closely to our answers and as a result, they developed a look and feel deserving of Penta Water's reputation. This is a look that we believe is both award winning and representative of Penta Water's brand value," says Soderstrom. The new bottle has a sleek, contoured shape that incorporates an ergonomic design that is visually pleasing. The new design will differentiate Penta from other premium brands on the market and will better portray the brand as a premium water. "Penta has had a fairly good look over the years. However, the bottle did not seem to offer the same level of value as the quality of the water inside. We believe the new bottle is distinctive, stylish, and at first glance, projects a radiance that is complimentary to the quality and purity of Penta Water," says Soderstrom.

### New design opens the door to new formats

The new bottle design will allow Penta to create a family brand identity for new sizes and product line extensions. Penta will explore adding two new sizes, 750 milliliter and 1.5 liter. "Over time", says Soderstrom, "we will make additional modifications and design changes as well as introduce new package sizes based on feedback from both our retailers and consumers." In addition to new formats, in the future, Penta plans to look into adding new products that will be built upon Penta's heritage of great taste, ultra-purity and Advanced Hydration. ■

# ULTRA SUCCESS

## PRODUCTIVE DAIRY BUSINESS FOR BYRNE DAIRY US THANKS TO SIDEL'S TECHNICAL SUPPORT.

Byrne Dairy's Ultra Dairy facility, located in East Syracuse, New York, continues operating successfully a Combi Predis FMm line for its ESL milk, flavored milk, and coffee creamers by working with Sidel for equipment maintenance and upgrades. Ultra took advantage of Sidel's maintenance program. Through this service agreement, Ultra is able to "make sure that the right maintenance is being done at the right time with the right parts." According to Brad Benefield, Maintenance Manager, "the maintenance and labor packages are a great option when starting up a new line. We purchased a state of the art production line and knew that the system would need tweaking and that our service technicians would need mentoring in order to maintain the equipment. With this knowledge and knowing up front what the cost would be to maintain the line, it was beneficial to buy the service package and establish a firm budget. This was also a great aid in setting up the spare parts inventory."

In addition to the maintenance agreement, two upgrades were recently purchased for the Sidel filler that allow for more flexibility and higher productivity. The Technical Upgrades Team at Ultra worked carefully with their Sidel Customer Service Manager to identify the best solution to match the needs of Ultra. Michael Sima, Senior Process Engineer for Ultra Dairy, states "the Sidel team worked to find a solution for us and not fit us into a solution." Ultra has found value through Sidel's after sales services and receives the support it needs to maintain the equipment. Sima explains, "We expect our suppliers to be knowledgeable, fair and professional. We expect them to deliver on their claims and to stand behind their work. Sidel has met these expectations and continues to be a business partner with us, providing assistance and technical advice as we continue to grow." Sidel and Byrne/Ultra have built a successful business relationship and continue to grow and strengthen this relationship. ■





TAIWAN

ORIGINAL TEA IN PET

TAIWANESE COMPANY HON CHUAN ENTERPRISE TURNS TO SIDEL TO PROVIDE ASEPTIC PACKAGING SOLUTIONS FOR READY-TO-DRINK HERBAL TEA.

As Taiwan’s largest and longest running beverage packaging manufacturer, Hon Chuan Enterprise is always looking to maintain its position and stay ahead in the fiercely competitive beverage market. To do this, Hon Chuan has been continually re-inventing itself and expanding its production capacity over the past 30 years, while at the same time actively collaborating with leading beverage companies in the region. Its latest collaboration is particularly exciting – a project with Coca-Cola to produce a ready-to-drink herbal tea product for the Taiwanese market. This is the reason why Hon Chuan invested in Sidel’s equipment last year. Based on its long track record of projects successfully managed in collaboration with Sidel, Hon Chuan purchased an aseptic Sensofill FMa filler as well as a SBO Universal

blower, running at 36,000 bph for a 535 ml round format and 975 ml rectangular format at 26,000 bph. Hon Chuan chose aseptic filling because the beverage can be filled at an ambient temperature, reducing the need for heating and maintaining more of the original flavor. Moreover the aseptic Sensofill FMa filler handles products and format changeovers from outside the sterile zone to ensure no loss of sterility and provides great production flexibility. The bottle production can also continue from 72 to 120 hours without interruption for sterilization in an environment that remains under absolute control. Mr. Tsao Shih-Chung, CEO of Taiwan Hon Chuan Group, explains the reasons behind this partnership: “Our confidence in Sidel hinges on the proven expertise of Sidel in the aseptic

technology. Aseptic projects are technically more complex and require a high level of know-how. The team at Sidel brought with them a wealth of expertise and worked closely with us at every stage to ensure that any issues were anticipated and resolved quickly.” The new equipment enlarges the Hon Chuan installed base for aseptic conditioning supplied by Sidel: SBO Universal blower, air and bottle conveyors, aseptic FMi filler, sleeving machines, shrinkwrapper and wrap-around case packer. They have been operating smoothly at a line efficiency of above 92% since 2006 to produce sensitive products such as green tea, black tea, oolong tea, milk-based tea and coffee. ■



Taiwan Hon Chuan Enterprise is a leading manufacturer in beverage packaging materials, providing complete solutions and all-in-one service for beverage companies and producers. Its portfolio includes preforms, PET bottles, metal and plastic caps and other products for the beverage industry. A well-known name in Asia, Hon Chuan has manufacturing facilities in Taiwan, China, Thailand, Indonesia, Vietnam and Malaysia.



TAIWAN



HEALTHY AT HEART

AFTER TWELVE-YEARS OF EXPERIENCE WITH SIDEL’S DRY PREFORM DECONTAMINATION, TAIWANESE BEVERAGE COMPANY, AGV CORPORATION INVESTED IN ANOTHER ASEPTIC LINE EQUIPPED WITH A SIDEL COMBI PREDIS FMA TO EXPAND ITS PRODUCTION CAPACITY FOR ITS LATEST RANGE OF OATMEAL NUTRITIONAL DRINKS.

AGV is one of Taiwan’s leading listed producers of foodstuff and beverage products and focuses on expanding its reach in the region to tap into the growing beverage market in Asia. Recently, AGV gave Sidel another vote of confidence by ordering a new aseptic line equipped with a Combi Predis FMa and downstream equipment for the production of oatmeal nutritional beverages and dairy-based products. The company was already convinced of the capabilities of Sidel’s dry preform decontamination that they had experienced in 2000. At this time, AGV procured an aseptic line equipped with a Sidel aseptic Combi FMi with DISIS. DISIS was Sidel’s revolutionary preform dry decontamination technology which was later enhanced and renamed Predis. The line is producing barley tea, juice, green tea and oats milk at 200 bpm for bottle formats of 600 ml, 1.5 L and 2 L at line efficiency levels of above 92% since installation. One of the pioneers in oatmeal nutritional drinks, AGV uses the technique of tri-enzyme hydrolysis technology to produce a smooth and mellow blend of oatmeal drink. The new beverage is hugely popular with the health conscious Taiwanese market. The new line is expected to begin production within the year to come. ■

Developing products for a healthier tomorrow has always been at the heart of AGV’s mission. Founded in 1971, AGV has been producing products that are not only tasty but deliver great quality and contribute to a healthy lifestyle. Some of these products include juices, tea, sauces, milk, canned desserts and health supplements.

INDONESIA

MORE EFFICIENCY & LIGHTER BOTTLE

For more than one year now, the aseptic Sensofill FMa filler from Sidel helped PT Uniplastindo Interbuana, the food and beverage leader in Plastic Packaging and OEM manufacture in Indonesia, improve its productivity and service. The objective? Meeting the needs of ABC President Indonesia – the market leader in food and beverages in Indonesia, which uses aseptic filling technology for many of its products. Installed with a SBO Universal2 blow-molder in late 2010 to replace former equipment, the line produces both 330 ml and 500 ml bottle formats. ABC President wanted to keep the existing bottle design for its Nu Green Tea and Nu Juice but change the neck for a more lightweight version. Working together, PT Uniplastindo experts and Sidel’s experts developed a bottle that is two grams lighter – from 19 g to 17 g for 500 ml and from 19 g to 12.5 g for 330 ml, and the two companies are now working on bottle designs for a brand new product. ■



**INVENT** TODAY  
**IMPROVE** TOMORROW



# SBO COMPACT2: STRETCHING OUT THE QUALITY

WITH ITS LATEST SBO COMPACT2, SIDEL CONSOLIDATED A RELIABLE AND ROBUST LINEAR BLOW-MOLDING MACHINE THAT IMPROVES BOTTLE QUALITY.

The SBO Compact2 delivers the high quality and performance levels you would expect from the SBO Universal blow-molder range. This latest evolution is industrially improved and more robust, while performing even better because of the inspired addition of electrical stretching.

## Bottle quality and process flexibility

The final quality of the bottle is determined by the quality of preform stretch-blowing using bi-orientation. Throughout this process, the aim is to ensure maximum process precision and repetitiveness, while obtaining optimal production speed.

To improve the process, Sidel developed a new stretch-blowing system for the preform and replaced the traditional pneumatic process with an electrical process by installing a servomotor and ballscrew assembly.

The new stretching console provides many benefits. It enables constant control of the stretching position and speed for perfect repetitiveness of the process and is more flexible as it can work on a variety of bottle sizes without the need for manual adjustments of the pre-blowing and blowing start detectors. Finally, the maximum stretching speed increases from 1 m to 1.3 m per second enabling higher production speeds. The stretching parameters are managed directly from the Human Machine Interface (HMI), and are no longer within the machine, making change-overs quicker and easier.

Further developments, in terms of preform feeding improved the productivity of these linear blow-molding machines: new, longer orienting rollers secure preform stability and infeed fluidity. Additional panel functions also help to make the machines more ergonomic for operators.

## The whole range of containers

Whatever the product – water, carbonated soft drink, juice, dairy product,

detergent or cosmetics – the SBO Compact2 can blow simple or standard shapes using either PET or other plastics from 0.2 L to 10 L containers. It can also manage the blow-molding of complex packaging, such as asymmetric shapes or flat containers, through the preferential heating process with a possible neck orientation. The DeepGrip packaging innovation, a box-conforming technology (see inset), is also supported by the SBO Compact2 platform, making it the first choice for many customers looking for reliability and flexibility.

As a natural evolution of the SBO Compact range, the new SBO Compact2 linear blow-molders, which include the SBO 4, SBO 4 PH, SBO 3 XL, SBO 3 PH and SBO 2 XXL PH, now run at speeds ranging from 2,400 to 7,200 bottles per hour. All SBO Compact2 blowers systematically benefit from a 100-hour mechanical run-off as a minimum, including one-hour bottle production. The systems can also guarantee equipment quality and production efficiency, even at such high speeds.

For any customers looking to switch to the new SBO Compact2 systems, the turnaround is particularly fast – machine installation, start up and commissioning can be secured and completed in less than ten days. SBO Compact2 blow-molders have already been purchased by customers in South Africa and South America – and these customers are already seeing the benefits of the performance improvements. And the benefits of this new system are in demand – as of December 2011, more than ten SBO Compact2 blow-molders were being installed across the globe.

The improvements don't stop with this new system. Sidel is constantly looking to improve its technology and is working to increase the process capabilities further to manage any type of container, including wide-mouth jars and heat resistant packages. ■



## SBO COMPACT2: THE RELIABLE PLATFORM SUPPORTING THE DEEPGRIP

Ideal for water and oil, the innovative DeepGrip large-format package is the first PET bottle with a deep blow-molded grip. It requires no external handle that makes it easier to use.

With a distinctive triangular shape, the 3 L bottle is produced using Sidel's punching-conforming technology (patent pending). This technology makes it possible to manufacture single-material packages in large, functional formats.

Trying to make bottles with deep grips using traditional blow molding technologies has a number of technical limitations. As mentioned Sidel obtains the deep grip by punching-conforming – a simple production process that eliminates the need to purchase or inject handles, so efficiency losses due to handle infeed or transfer are removed. Further benefits of this single-material bottle include new shape possibilities and require just one recycling stream.



# RAISING STANDARDS IN PET

**THE NEW HIGH SPEED VERSION OF SIDEL'S COMBI PREDIS FMA IS DEDICATED TO SINGLE SERVE BOTTLES, MEETING THE SENSITIVE BEVERAGES INDUSTRY'S EXPECTATIONS IN TERMS OF REDUCED OPERATIONAL COSTS AND THE SUSTAINABILITY AGENDA.**

Based on its expertise of the end-products and with proven experience in aseptic packaging, Sidel is now enlarging its portfolio by adapting its aseptic Combi Predis/Capdis FMa technology. The new high speed version can handle up to 48,000 bottles per hour for small containers up to 700 ml used mainly for on-the-go consumption. It's the perfect solution to the growing demand for tea, juice, nectar and isotonic, which are increasingly filled in aseptic, especially in Asia, a market requiring high output production and where water is a resource of rising demand and decreasing supply.

#### **A strong experience in aseptic**

Sidel has solid experience in achieving high outputs for aseptic products.

Back in 2004, the aseptic line installed in the US was aimed at producing isotonic and apple juice at 50,000 bottles per hour using wet bottle decontamination. Since then, more than 40 Sidel aseptic lines have been in production worldwide at an output equal to or higher than 48,000 bottles per hour for various applications like tea and liquid dairy products.

This market for high speed production of sensitive products is very demanding in terms of optimizing operating costs and limiting the environmental impact. So Sidel is developing the tested and proven aseptic Combi Predis/Capdis FMa further. Based on the worldwide success of the unique dry preform and cap decontamination system, it allows sterilizing of all types of preforms and

caps within an integrated blow-fill-cap solution for sensitive products while using less and saving more. It illustrates Sidel's role as an industry pioneer when it comes to beverage packaging technology and its conviction that innovation raises the beverage industry to a new standard.

Based on the proven Predis technology, the first Sidel dry preforms decontamination by  $H_2O_2$  spray with the Combi DISIS was seen in 1998. In 2006 attention focused on a more advanced technological breakthrough which redefined the game – Sidel Predis, the unique dry preform decontamination solution. Predis has been adopted for aseptic bottling of any kind of beverage whether low or high acid: juice, tea, isotonic beverages, liquid dairy ➤





UHT MILK	ESL DAIRY PRODUCTS	JUICES AND TEAS	CSD WITHOUT PRESERVATIVES	WATER
<p>“</p> <p><b>WASTE REDUCTION DUE TO THE ELIMINATION OF THE ALUMINUM SEAL.</b></p> <p><i>Laiterie St-Denis-De-L'Hôtel, France</i></p>	<p>“</p> <p><b>A REVOLUTION FOR OUR INDUSTRIAL MODEL.</b></p> <p><i>Danone, Russia</i></p>	<p>“</p> <p><b>THE RIGHT TECHNOLOGY WITH THE RIGHT PARTNER.</b></p> <p><i>Aujan, Saudi Arabia</i></p>	<p>“</p> <p><b>VERY SIMPLE AND MUCH EASIER TO USE THAN OTHER TRADITIONAL ASEPTIC SOLUTIONS.</b></p> <p><i>Hauser Weinimport, Germany</i></p>	<p>“</p> <p><b>BEVERAGES IN A PRISTINE ENVIRONMENT.</b></p> <p><i>RTD Beverages, US</i></p>

products and UHT milk. In response to evolving consumer preferences and increasingly strict food regulations, sensitive beverages traditionally packaged with preservatives now can be reformulated naturally. Predis is one example of a technological leap forward that introduces a new economic and environmental model. But as much as it is technologically advanced, Predis is also extremely simple to operate.

Economical, ecological and flexible

The Predis technology is included in the overall system of the Combi, which combines bottle blow molding, filling and capping in a single enclosure. Combi Predis is available in different configurations depending on the products to be filled, from water to UHT milk, and the distribution channel chosen, cold chain or ambient temperature. With this broad portfolio of Combi solutions, Sidel has the most complete range offering in the market. In this specific configuration, Predis technology ensures a high standard of hygiene while offering unrivaled cost-effectiveness along with product and environmental benefits. Contrary to traditional filling methods that require hygienic rinsing, Combi Predis and dry preform decontamination technology set a new standard by guaranteeing 100% sterilization of the package for

sensitive products using no water and very little chemicals. While 250 m³ of water and 200 liters of chemicals are used daily to decontaminate bottles on a traditional aseptic bottling line, Predis dry decontaminates preforms using hydrogen peroxide mist, requiring no water and creating no effluent. Other benefits include energy savings, a smaller footprint and the potential for lighter bottles. Dry preform decontamination is also proven to cut yearly operating costs by 30% (compared with traditional dry bottle decontamination) and help preserve the environment.

Because bottles are blown from decontaminated preforms and the empty bottle does not endure any thermal stress, the revolutionary Combi Predis system provides total freedom of design and shape. It is also proven to deliver quick and easy format and liquid changeovers as well as 120 hours of non-stop production. The Combi Predis FMa running at high speed will be available for bigger sizes of bottles in the upcoming months. ■

**PREDIS AT A GLANCE**

- › 13 years of experience
- › 60 dry preform decontamination systems sold so far
- › 10,800 to 48,000 bottles per hour
- › Over 5 billion bottles produced worldwide with Predis to date
- › 1 million liters of chemical agents saved
- › 600 million liters of water saved (equivalent to 220 Olympic swimming pools)

# WITH ORIGINAL PULP

THE INCREASING DEMAND FOR PRODUCTS WITH PULP AND PARTICLES IS NOW RAPIDLY SPREADING ACROSS THE WORLD. THUS, THE BEVERAGE INDUSTRY NEEDS SOLUTIONS TO MATCH THIS DEMAND. SIDEL PROVIDES THE RIGHT TECHNOLOGY TO FILL SUCH PRODUCTS EITHER IN HOT-FILL OR IN ASEPTIC.

The consumption of beverages containing pulp or particles is becoming more and more popular and corresponds to a consumers' request for more natural and value added products. To help the beverage industry meet such rising demand for healthier drinks, Sidel adds the capability to offer filling alternatives to care for those sensitive products

**Special requirements**  
Products with particles are not standard sensitive products: they are produced with original parts from the fruits and are considered as premium products. There is not only one kind of particle, but various ones: pulp, nata de coco, fruits pieces, aloe vera, citric fruit sacs, etc. Such wide diversity brings more complexity when it comes to filling these products. Furthermore, their dimension is not the unique challenge – the physical integrity of the particle is also a very important aspect as the raw material remains very fragile. Filling quality, filling accuracy as well as particles distribution are also strategic criteria.

**Complementary particles filling technologies**  
In order to respect those specific product requirements, Sidel is enlarging its portfolio providing filling alternatives to produce beverages with pulp or particles in PET containers: hot-fill and aseptic, respectively with the Veloce ISD and the Sensofill FMa fillers. Both technologies match perfectly with the different market expectations. They can dose particle quantities concentration ranges from 10 to 200 ml, depending on the recipe and bottle size (from 200 ml to 2 L). They also both meet relevant official standards for sensitive products which vary from country to country.

**Accurate particle filling and high product integrity**  
The very high accurate dosage of the filler guarantees a very steady and precise quantity of particles in the final beverage filled, while minimizing waste of raw material. Sidel's range of fillers also guarantees the filled beverage quality, and consequently maintains the physical integrity of

particles. They handle the product very carefully to avoid breaking the particles and secure their intactness. They also make sure the concentration in the liquid meets the products' specifications. It really highlights the premium image of the beverage which feels perfectly authentic. Contactless valves improve hygienic filling. The flow cut-off of the stream is very precise and does not cause any dripping or product waste. Both particle filling technologies are available as a stand-alone filler or in Combi configuration, an integrated blow-fill-cap solution. The Combi Veloce ISD (hot filling) and the Combi Predis/Capdis FMa (aseptic filling with dry preform and cap decontamination) guarantee the full customer's product integrity. ■



# STACK STACK STACK & PACK

IN SMALL TO MEDIUM SIZES AS WELL AS IN PACKS OF SIX, STACK & PACK BOTTLES BENEFIT ALL KEY PLAYERS IN THE VALUE CHAIN.

With its new stackable bottle concept, Stack & Pack, Sidel provides the first stacking solution of its kind for mid-size bottle capacities from 250 ml up to 1 L. A deeper-than-usual concave indentation at the base of each bottle (Sidel's patented "stroke base" technology) enables highly efficient stacking. The neck of the bottle below fits into the base of the bottle above, significantly reducing the required amount of stacking space and eliminating any need for interlayers.



Once the bottle is filled and capped, a stretch sleeve is wrapped around to form a pack of six bottles just like an elastic band. The compact stack enables 10 layers instead of six to fit on a standard European pallet, increasing the number of bottles on a pallet by 40 percent. Stack & Pack is suitable for sensitive products like juices, liquid dairy products, and milk and addresses the needs of all supply chain players, from the producer to the end-user.

Economical advantages

Brands, private labels and co-packers benefit from many economical advantages: expenditures for carton interlayers can be deleted from the account books, storage space is optimized, and fewer pallets in trucks are required for transport of the same volumes of full pallets. The reduction of blowing pressure by up to 10 bars using the stroke base solution during production generates further energy savings. The stackable bottles can be produced in various shapes and sizes; their broad surface area offers great branding flexibility. And the stack-ability of the bottles puts an end to crushed bottle necks. Stack & Pack also offers retailers multiple advantages. Because the pallets are delivered without interlayers, no waste needs to be removed before displaying the bottles. The increased number of

bottles stacked on each pallet results in less restocking of shelves. Additionally, the look and feel on the shop floor is a lot more attractive, offering additional new shelf-end promotional opportunities and generating more purchasing incentives. High product availability and rotational product presentation result in higher visibility and, in the end, higher sales volumes.

Easy handling at all levels

Last but not least, end-consumers also benefit from the Stack & Pack concept. For eco-conscious customers, the use of 100 percent recyclable PET is a buying argument, while the use of a safe cap reduces waste. Compared to classical milk bottles, for example, no foil is needed to secure the cap. The bottle opens conveniently right from the start. The bottles are also very easy to grab and pour. And minimum space is required for storage in cupboards, fridges or car trunks. With this holistic packaging concept, Sidel strengthens its position as a global solution provider for the beverage industry. The technology is up and running at Sidel's production facility and is ready for field tests at customers' plants. Sidel's pioneering Stack & Pack solution will be displayed for the first time at Anuga FoodTech, March 27-30, 2012, hall 7, booth A11-B24. ■



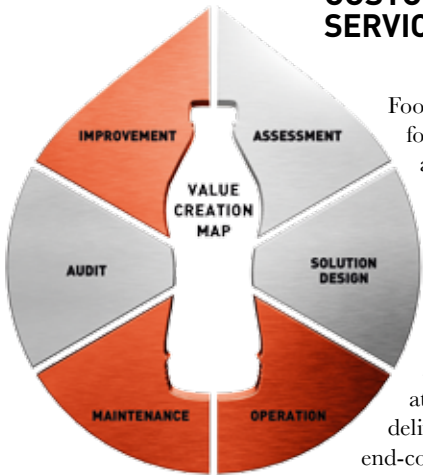
PRODUCT PACKAGE INTERACTION (PPI)

The release of new beverages, recipes or bottles is a complex business, especially with sensitive drinks. Sidel has invested one million euros in R&D in order to integrate all required development steps into a comprehensive offer. With its longstanding expertise, the Sidel Group is able to evaluate and identify the most suitable materials, bottle shapes and caps for each drink, taking into account each drink's and each producer's specific characteristics and issues. At the pilot plant for aseptic production, Sidel's experts reproduce all industrial packaging steps on a reduced scale. Different PET packages are tested under simulated real-life conditions. This includes physical, chemical and sensory analyses, as well as studying different indicators and beverage sterility validation.



# THE WHOLE PACKAGE

IN THE INTEREST OF FOOD SAFETY AND A GROWING MARKET FOR SENSITIVE PRODUCTS, SIDEL OFFERS CUSTOMERS WORLDWIDE A COMPREHENSIVE SERVICE PACKAGE WITH ALL SIDEL SOLUTIONS.



Food safety is a major concern for both production and packaging companies. Sanitary and environmental regulations must be complied with at every production step. With over 30 years of experience in sensitive products technology, Sidel knows exactly what needs to be done at what point of production to deliver the safest products to the end-consumer.

One critical point in the production process of sensitive products is to ensure hygiene for the parts which are in touch with the product. To this effect, Sidel has optimized the whole machine preparation cycles, including the cleaning and the sterilization cycles, as well as the neck transfer grippers for the equipment installed so far. Today's dynamic cleaning-in-place rotary unions enable cleaning cycles to be carried out while the machine is in rotation. This new configuration allows different machine preparation cycles to overlap, which results in a reduction of machine downtime of up to 25 percent. On the new gripper transfer arm which is now

available on the FMi filler, the tolerance of the under-neck diameter has been improved resulting in a reduction of damaged necks and bottle losses. Sidel also offers wide aseptic technical support. First of all, on-site technicians operate on different levels to ensure customers an all-around service package. They are always up to date with the specific conditions and constraints applying to the production of sensitive products. They are trained on the aseptic equipment in use and know their particular configurations. Customers can also benefit from a 24/7 technical support hotline, where Sidel's technicians can operate on the equipment through remote access. Finally, a dedicated unit works on continuous equipment improvements.

The complete Sidel package including services ensures that sensitive products will not only be safe in terms of hygiene, but they will also remain unaltered in the packaging process, maintaining organoleptic properties, while continuously improving efficiency on the installed equipment<sup>1</sup>. ■

**GET THE MOST OUT OF SIDEL EQUIPMENT**  
With the new Technical Seminar Training catalog, customers can plan their training sessions according to their individual requirements. Participants not only benefit from Sidel's long-term expertise, but they can also share their knowledge with participants from other companies and cultures. Further information and online registration through <http://training-seminar.sidel.com>

<sup>1</sup> For more information about Options & Upgrades solutions available on all Sidel equipment, visit: [www.options-upgrades.sidel.com](http://www.options-upgrades.sidel.com)



# LOCAL SHRINKING

**LAUNCH OF THE FIRST CERMEX SHRINKWRAPPER DESIGNED AND MANUFACTURED IN CHINA.**

After reaching the milestone of 100 machines assembled in China at the start of 2012, Cermex – Sidel Group – is now launching the TSB 3, a seamless shrink-wrapper specially developed for the Chinese and Southeast Asian markets. This is another step forward in the globalization of this Sidel subsidiary, which specializes in end-of-line packaging solutions and is seeking to respond to local demand.

Cermex has been assembling machines in Beijing since 2008 thanks to a technology transfer from France, which means it can offer case packers, shrink-wrappers and palletizers locally. With the new TSB 3 shrink-wrapper, Cermex is expanding its offer with a machine whose design, parts/components and assembly are almost completely Chinese.

## Local design in line with Cermex quality standards

The TSB 3 integrates many of the features from the generation of VersaFilm® shrink-wrappers. Developed to respond perfectly to local constraints and specifications as well as the Sidel Group's complete line needs, this new machine is compatible with China's CCC standards and with ISO standards. Based on a 'Design to Cost' approach, the product specifications were simple: imagine a competitive, flexible shrink-wrapper that could be easily produced in large numbers. This is just what the Cermex Technical Center and its Chinese team have done.

This multi-cultural and multi-competence structure has been enhanced with a local Purchasing/Supply and Quality Assurance organization.

## Technological advantages and an attractive total cost of ownership

The TSB 3 seamless shrink-wrapper is, above all, a simple and highly accessible machine. Its maintenance is made much easier and its ergonomics are further optimized. Special mention goes to the machine guarding, which is sleek and modern. Equipped with servomotors, the injection table is extractible, which makes it fully accessible and the TSB 3 is equipped with the SFR adjustable product selection system to enable format changeover in less than a minute. With new, more intuitive automation, components can be replaced in Plug & Play mode. Further benefits include an optimized shrink tunnel with reduced power consumption and a touch-type human/machine interface that is more ergonomic and intuitive.

## A promising start

Already on pre-order by several long-time customers, a few of the Cermex seamless shrink-wrappers have already been delivered. Sales officially began in early 2012. ■

### TSB 3 SEAMLESS SHRINKWRAPPER

- › Capacity of 40,000 bottles/hour (55 cycles/min)
- › SFR adjustable selection system designed to handle product diameters of 55 to 115 mm
- › Film thickness from 20 to 80 microns
- › Energy consumption cut by 10%

# WEIGHT & VOLUME

**NEW FILLER FOR BI-PHASE PRODUCT OFFERS A SIMPLIFIED 2-IN-1 SOLUTION THAT ACCOUNTS FOR BOTH WEIGHT AND VOLUME OF SENSITIVE PRODUCTS.**



When two diverse ingredients need to unite into a single product, this usually means having to juggle between different technologies and timely changeovers on the filling line. Not anymore. Thanks to its extensive knowledge of volumetric and weight-filling technologies, Hema – Sidel Group – developed a better fit: a new Bi-Phase 2-in-1 filling solution; the industry's first configuration that can handle both weight- and volume-based dosages simultaneously for sensitive products.

Consumer demands have been increasing for bi-phase products, such as yogurt drinks with fruit bits. So this is not only a key innovation for Hema but also a boon in savings and simplicity for the market in general. "These two dosage technologies dovetail seamlessly into a single system, so it offers a very flexible

approach for industrials," says Marc Vincent, Sales and Marketing Director. "Manufacturers can produce thick products on a volume-based turret, thinner products on a weight-based turret, or both at the same time. This new level of flexibility comes at no compromise to performance. Depending on the chosen recipe and the volume to dose on each carousel, machine speeds can range from 50 to 800 packages per minute.

## The best of both worlds

The Bi-Phase filler unites two proven existing technologies by Hema. The MV-series volumetric filler allows for dosing thick products like jams and fruit based products. And the GW-series weight-based filler is equipped with the latest generation of weight sensors, offering extreme dosage precision and is perfect for runnier products, such as table oil, ketchups and salad dressings. The new Bi-Phase configuration (GWm series) is perfectly adapted to fresh liquid dairy products (ESL) with a shelf life of up to 60 days, such as yogurt drinks, probiotics and smoothies. Thanks to its universal nozzle, it can switch easily between foamy liquid products like milk

and thicker products like yogurt drinks with fruit bits or cereal, without having to change the nozzle tip. Its spout can handle volumes ranging from 60 ml to 5 L, and it allows considerable time savings thanks to rapid changeovers. The range spans from 12 to 80 heads.

## Simpler and safer

With fully automated cleaning and sterilization cycles and the ability to pre-program dosage volumes and rates, there's no need for human intervention between two products. This ensures full integrity of the product environment and therefore, eliminates the risk of exterior contamination. Thanks to the Bi-Phase system's ability to auto-monitor production, it's able to ensure full traceability of all information linked to production parameters. Furthermore, the hygienic design of the Bi-Phase filler meets the highest expectations of the dairy industry and complies with 3A, EHEDG and FDA standards. ■



SHORT-TERM  
**BENEFITS**

LONG-TERM  
**CHANGE**



# THINK GREEN

FOR TWO DECADES, NON-PROFIT GROUP ORÉE HAS BEEN HELPING BUSINESSES FIND SMARTER WAYS TO MAKE A POSITIVE DIFFERENCE.

Every company has its own areas of expertise. Unfortunately, that usually isn't ecology. Their intentions are often good: businesses do want to take positive actions. But they also have to stay focused on growth. So the trick is finding the means to optimize growth and profits in the most responsible way possible. That's where organizations like Orée come in.

**Orée: A 20-year non-profit group**

Founded in 1992, Orée is a France-based non-profit organization dedicated to promoting environmental best practices in business. It achieves this by collaborating closely with all types of key industry players, from private companies, local authorities and institutions to academic organizations and other non-profit groups. Since its creation, Orée has been developing concrete and practical tools to help businesses integrate meaningful environmental initiatives into their ongoing strategies and operations. The group functions via a network of dedicated adherents who are on a constant mission to better understand how growth impacts the environment and who are determined to reduce environmental disparity, which they consider a major stumbling block to social equality. More specifically, Orée has built its

activity around what it considers to be seven of the most urgent priorities in business today. These include "Business and biodiversity," "Eco-design of products and services," "Environmental expertise," "Industrial and territorial ecology," "Environmental labeling and reporting," "Environmental risks" and "Environment and public health." Though Orée is a French organization, they are increasingly active abroad as well. "Environmental responsibility can never be a strictly local affair. Good ideas shouldn't have boundaries," explains Ghislaine Hierso, President of Orée and Vice-President to Executive Vice-President for Public Entities and European Affairs of Veolia Environnement. "Over the past few years, Orée has been welcoming members from various countries, such as Switzerland, Belgium and Morocco. In order to be better known at the global level and to encourage a larger debate, we strive to constantly develop farther-reaching tools." Of course, the communication must follow too. Hierso continues, "After recently introducing an English version of our website, we quickly followed up with a Spanish one as well. Additionally, Orée participates actively in leading conferences at both the European and international level." Of their seven core priorities, two of the

most critical focuses for Orée have been, and will continue to be, "Business and biodiversity" and "Eco-design of products and services."

**What is biodiversity and why does it matter?**

Biodiversity refers to the delicate and important balance of diverse life forms on earth. A threat to this balance could have disastrous long-term effects on a vast range of environmental services that are crucial for business and more generally, for all human activities. These include: provisioning services like food, fresh water, raw materials, fibers or biochemicals; regulating services such as climate regulation, water flows and purification, waste treatment or pollination; and cultural services like beautiful landscapes or sources of inspiration. That's why Orée is determined to help organizations implement effective biodiversity actions into their strategies. In 2005, following the Biodiversity and Governance conference at UNESCO and the publication of the Millennium Ecosystems Assessment, Orée teamed up with the French Institute of Biodiversity (IFB ) to unite businesses and scientists into a biodiversity-focused working group for the first time ever in France. Since then, this partnership has led to multiple important meetings across the



In November 2011, while participating in the annual "Prix Entreprises et Environnement" (Businesses and Environment Awards) during the Pollutec fair in Paris, Refresco France and Sidel were awarded first prize in the category of "Efficient and Clean Technology" [see article page 35]. Created in 1987, this award has been presented each year since 2007 by Orée and the ADEME (Agence De l'Environnement et de la Maitrise de l'Energie/ French Environment and Energy Management Agency), as well as the French Ecology ministry and the "Credit Cooperatif." As part of this event, Sidel had the opportunity to meet Orée and learn more about its mission and vision.

NATHALIE BOYER,  
Managing Director of Orée

globe, including most recently, the Global Platform for Business and Biodiversity in Tokyo in 2011 and the 11th Conference of the Parties (COP11) of the Convention on Biological Diversity in Hyderabad, India in 2012. Additionally, Orée has been instrumental in developing important biodiversity-related publications over the past few years, which cover business feedback, future-focused strategies, case studies, reporting standards and other essential key topics.

**The importance of eco-design today**

More and more businesses are recognizing the need to reduce the environmental impact of their products and services throughout their lifecycle, from the extraction of raw materials to recycling and reuse. But, naturally, they need to achieve this without sacrificing quality or performance. They want the best of both worlds.

Since 2006, through the working group "eco-design of products and services," Orée has brought together leading French experts and players to examine how to integrate eco-design into organizational strategies (for both businesses and local authorities). This collective analysis has led to the creation of an internet platform, which targets any structure (companies or organizations), regardless of size and purpose, that wishes to commit to an eco-design approach or merely learn more about this subject. A first part aims to understand the approach through thematic articles, from beginners to advanced. A second one deals with the role played by every skill within a company, allowing people to identify their stakeholders, the skills and resources required, and the challenges and stakes associated with their function. The last part offers concrete experiences of companies having operated an approach of eco-design and to >





JUNE 20-22, 2012, RIO DE JANEIRO, BRAZIL

Two main themes: 1. Worldwide governance 2. Green economy  
Before the conference, a number of on-site side events sponsored by governments, major groups, UN system and other inter-governmental organizations will be organized as well:

- › Third Preparatory Committee Meeting of UNCSD (13 -15 June 2012)
- › Four Days of Dialogue on Sustainable Development (16 -19 June 2012) to address the following eight topics: poverty eradication, food and nutritional security, energy, water, economics of sustainable development, including sustainable patterns of consumption and production, innovation for sustainable development, sustainable cities, decent work for all, migration, and oceans.

understand their objectives. This interactive platform allows companies to gain valuable insight, to compare the impact of their various activities, and to share their feedback and experiences with other members for free.

An active group with a very busy agenda

Orée is a significant voice in the national discourse concerning environmental protection. Among many key events on their busy schedule, they recently participated in the preparation of the National Biodiversity Strategy, they helped to monitor the “Grenelle de l’Environnement” in the national Agenda 21 Committee, and they took part in the Sustainable Development and Environment Commission of the CNIS (National Council for Statistical Information). Orée proposes working groups to their members, notably with regards to industrial, transportation and logistics ecology, as well as environmental risks. “This opens up a new chapter dedicated to territorial collectivities on our risk-management platform,” explains Nathalie Boyer, Managing Director. “We’ll also continue proposing various events for anyone to take part in. For example, in early 2012, we’ll be proposing two ‘BibliOrée’, which are presentations of environment-focused literary works in the presence of their authors, and a conference on the EMAS (Eco Management and Audit Scheme) with the support of the French Ecology ministry. Of course, we’ll also have our annual summit and various conferences. Every event in which we participate will be with and through our partners.” The year 2012 shows no signs of slowing down. Coming up, Orée will take



GHISLAINE HIERSO,  
President of  
Orée and  
Vice-President  
to EVP for Public  
Entities and  
European Affairs  
of Veolia  
Environnement

part in the Rio+20 United Nations Conference on Sustainable Development where one of the key themes will be green economy. According to Ghislaine Hierso, Orée will focus on efficiency above all. “It’s about imagining a new industrial and territorial ecosystem and a new economic model based on real efficiency – an economy that values quality above quantity,” Hierso exclaims. “For example, it is absolutely essential to have clear information regarding energy used and protocols implemented in order to achieve minimal consumption. Also, the investment and development of renewable resources is one of our greatest potentials for enhancing our world.” Additionally, Orée will participate in the World Water Forum in Marseille and the Convention on Biological Diversity in Hyderabad, as well as the ongoing debates of the climate convention following Durban.

And, of course, the group will have to find time for a quick birthday celebration too, as Orée will celebrate its 20-year anniversary in November 2012. ■

USEFUL LINKS

[www.oree.org/en](http://www.oree.org/en)  
[ecoconception.oree.org/EN/index.html](http://ecoconception.oree.org/EN/index.html)  
[risques-environnementaux.oree.org](http://risques-environnementaux.oree.org)  
[www.comethe.org](http://www.comethe.org)

More information on business and biodiversity and industrial ecology:  
[www.uncsd2012.org/rio20](http://www.uncsd2012.org/rio20)  
[www.earthsummit2012.org](http://www.earthsummit2012.org)



# BECOMING AN ECO WORLD

## PEOPLE AROUND THE WORLD ARE MAKING GREAT STRIDES IN REUSING AND RECYCLING PLASTIC BOTTLES.

Recycling plastic bottles is nothing new. We have been reusing and recycling our plastics for years. However, there have been some huge developments in what we can do with this recycled plastic.

Let there be light

Over in the Philippines, a surprisingly simple initiative is changing the way people light their homes and even bringing a bit of brightness into the lives of the country’s poorest people. The project, ‘Litre of Light,’ uses the most basic of ‘technology’ – a plastic bottle filled with water – to create an environmentally-friendly alternative to the electric bulb. The bottles are fixed to a metal panel and attached to the roofs allowing the water to refract the light from the sun into the room. It’s a project that is

transforming people’s lives. It’s not that these people don’t have electricity, it’s just that they can’t afford to use it. As such, they have been forced to live in virtual darkness. With ‘Litre of Light’, the poorest people across the Philippines can now light their homes...for free.

Plastic recycling?  
There’s an app for that

In Singapore, where technology is king, Nestle launched an innovative ‘app’ to help people recycle their waste correctly. It all stems from an idea from one of Nestle’s researchers who noticed that people in her apartment block were still sorting their plastics incorrectly. So, Nestle decided to come to the rescue with the ‘123Recycle’ application. All the user has to do is scan the barcode of the plastic they want to recycle and the app

tells them the correct place to put it. And because it’s on a smartphone, people can use it wherever they are – at work, at home, in the park, at shops – so there’s no excuse for not recycling plastics! The app was created by Developed for Nestlé Singapore in collaboration with the Nanyang Polytechnic School of Information Technology and is being supported by the Singaporean Government’s National Environment Agency, the Singapore Environment Council and the Waste Management and Recycling Association of Singapore.

The new trend for upcycling

The new trend in the world of plastics is ‘upcycling.’ It’s all about recovering materials and making them into something new. Behind the concept of upcycling is the idea that used



materials, in many cases plastics, are given a new lease of life and turned into something that is often more valuable than the original use.

With the recent economic downturn, upcycling has reached new levels of popularity. Anything from clothes and jewelry to handbags and surfboards, entrepreneurs have been creating a whole array of new products from so-called ‘waste’ products.

One of the most well known upcyclers is TerraCycle. The company, based in the United States, has even formed partnerships with major brands such as Aveeno, Kraft and Bic to turn their packaging into notebooks, purses, pencil cases and bags.

Designs on recycling excellence

Miniwiz is a design, engineering, manufacturing and product marketing company based in Taipei. It is completely committed to creating beautifully designed objects for a modern society, but incorporates the latest technologies to do this. Many of its creations use recycled plastics at their heart...they call it Radical Trash Engineering.

The Polli-Brick is a revolutionary building material made from 100% recycled polyethylene terephthalate polymer (or R-PET). Each ‘honeycomb’ shape, self-locking brick can be assembled into any customized shape. There is also the option to integrate solar LED lighting into the bricks, which were used in the past to create stunning visual displays.

Polli-Bricks were also used to create the world’s first Polli-Boat, a trimaran made entirely of recycled materials. Seven hundred and sixty Polli-Bricks and a newly developed green material WPC (wood-plastic composite) were used and the boat also runs on renewable energy systems being powered by both solar and wind.

With so many uses, the Polli-Brick looks set to become the new building material of choice.



“THE POLLI-BRICK LOOKS SET TO BECOME THE NEW BUILDING MATERIAL OF CHOICE.”

MINIWIZ  
The Polli-Brick

**The ultimate recycled “hotel”**

If you happen to visit Iguazu Falls in Argentina, be sure to go to the ‘Casa Ecologica Botel’ in Puerto Iguazu. Alfredo Cruz and his family built their house using only recycled materials and it really is an inspiration to behold. There are 1,200 PET bottles used as ‘bricks’ in the walls, 1,300 pieces of food packaging creating the roof, 140 CD cases to form the doors and windows, and finally another 320 PET bottles to make the furniture... even the bed was designed with 200 PET bottles.

**Doubly sustainable in northern Nigeria**

In other parts of the world, building with bottles is more than innovative – it’s also downright practical. In northern Nigeria, it’s proving sustainable on multiple levels. In addition to providing affordable housing solutions (merely one-third of the cost of a traditional home), it offers a new way “to collect” the empty bottles from the streets and rivers.

In a single village, a group of 25 homes have been built entirely with empty bottles – more than 7,800 bottles per home. They include all the normal

characteristics and follow the same circular form as the typical homes in the region. Best of all, there’s no compromise to quality. In fact, the bottles, filled with sand, are 20 times stronger than traditional bricks. And they also protect better from the heat.

It just goes to show exactly what you can create from recycling plastics into something new.

While we may not all be able to build our own houses and boats from R-PET, or even have the entrepreneurial spirit to set up an ‘upcycling’ company, there are new developments happening in the world of recycled plastic bottles all the time. Some are cutting edge, others are refreshingly simple, but all promise that the future of recycling is an exciting world to be part of. ■

AT YOUR SERVICE!

The next issue of Inline is due out in October 2012. In this fourth issue, you’ll learn more about Sidel’s Value Creation Map.





**RAISE YOUR PETS  
TO THE NEW STANDARD!**



#### **DRY PREFORM DECONTAMINATION**

#### **IS THE SENSIBLE CHOICE FOR SENSITIVE PRODUCTS**

Who said you can't have it all? Now with Sidel's new standard of sensitive production – dry preform decontamination – you can have total production simplicity at the lowest possible cost. Proven to minimize manual tasks and maximize your use of resources, the highly reliable Combi Predis™ requires just one operator, fewer pieces of equipment and less maintenance, resulting in an impressive return on investment you'll want to toast to.

**IT'S THE PROVEN MATCH THAT WILL ALTER YOUR PERSPECTIVE**



**A BETTER MATCH**

[www.sidel.com](http://www.sidel.com)