Elvan | Turkish Delights
Midor | Truly Swiss – Truly excellent
Baby Food | Aseptically filled baby food in cups
Dear Readers,

After we had the opportunity to celebrate three centennials in the past year, the 20th of October 2006 gave us a renewed cause for celebration. We officially opened our new location in Hangzhou (China) with a magnificent celebration. Customers, suppliers, employees and other guests fêted the completion of the premises and toasted to a successful future. As has been shown, this was for a very good reason: Emerging markets such as China and India have registered strong growth. In these countries we achieved an extremely gratifying growth rate of over 50 per cent in turnover. In addition, the incoming orders of the entire group have also developed very positively in the past financial year and at 17 per cent lie over the average market growth rate (11 per cent).

The World Packaging Organization’s award of the “World Stars” for the new “Pull Pack” flexible bag package gave us an additional reason to celebrate. This award is only presented for packaging with the highest level of quality, innovation and technology.

Many biscuit producers have chosen fully automated packaging in order to achieve a higher productivity. Thereby modern, optically supported robots gently and reliably grasp the products. Sigpack Systems have developed the so called “Airflow Tool” for products with fragile or sticky surfaces. Both the grippers and the robots have extremely low maintenance costs. Additional interesting articles inform you about topics such as flexible coffee packaging in restrictive areas, baby food aseptically filled into cups and flexible confectionery process techniques.

Surely you noticed the new organization of the Packazine into Pharma and Food/Non Food sections. I wish you even more reading enjoyment with this new reader-friendly design!

Friedbert Klefenz
President
Bosch Packaging Technology
A bright and confident future

On the 20th October, 2006, Bosch Packaging Technology (Hangzhou) Co., Ltd. (PACN) held a formal opening ceremony for its new plant. Over 500 customers, suppliers, employees and other guests were in attendance.

Mayor Jin and many other local government officials also attended, along with the president of Bosch Packaging Technology, Mr. Klefenz, and his colleagues in Business Unit Management and Divisional Management.

Opening speech
In the opening speech, Mr. Mack thanked the company’s customers for their support and expressed his appreciation to the staff, which has grown from an original seven employees to almost 180. He stressed that the employees’ dedication was the biggest contributor to the company’s success. Mr. Klefenz stated that the strategy in Hangzhou is very simple, with the first priority being the development and manufacture of products for China and Southeast Asia. The company’s second priority is the export of Chinese made products to the American and European markets. He also appreciated the support from the Chinese Government, the great work of the employees, and the customers’ support.

The ceremony
In front of the assembled audience, a stage door was then slowly opened to reveal a bright light, which symbolized that PACN has prepared itself for a bright future and that Bosch Packaging (Hangzhou) has been the largest production and development center of Bosch Packaging in Asia. An in-house demonstration followed directly after the opening ceremony, with all the locally made, high quality, advanced machinery, put into motion in the assembly hall. Three business seminars were also held separately for pharma, confectionary, and food. These allowed our guests to get acquainted with the advanced techniques of our machines, as presented by the Business Unit Managers. The whole event left a deep impression on our customers, and also our Bosch Management colleagues from around the world, that Bosch Packaging Technology (Hangzhou) has already done an outstanding job and will play a more important role in the Asian market, and even the global market, in the future!

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„It’s all about sweets”

Trends with catchwords such as wellness, sugar-free, premium, real natural ingredients and exotic spectacular combinations of flavors will determine our sweet lives.

What we love about sweets
Despite strong new product development levels, the sugar confectionery industry is facing slowing or decreasing sales in most markets due primarily to consumers’ growing commitment to healthier eating. Manufacturers are responding to this by offering products with various ‘low in’ claims as well as those that are fortified with essential vitamins and minerals or contain real fruit. More natural products and those containing functional ingredients with specific health benefits are also becoming more widely available. The chocolate market was spiced up by new flavours and ingredients. There is a move towards unusual flavours (see graph top ten of unusual chocolate flavours) and increasingly to more natural products. Some of the most unusual flavours are introduced in limited editions. They make it easier for manufacturers to test out new ranges.

Top Ten Unusual Chocolate Flavours
Children are high consumers of gum. Other age and gender groups are being targeted with gums offering added vitamins and minerals and other ingredients like guarana and caffeine. Another interesting gum can be used as an appetite suppressant, as it contains ingredients that will give a filled-up feeling.

Sugar Confectionery Consumption by region
North America was the most active region in the category of sugar confectionery. The Asia Pacific region was the second most active, with activity losing ground since last quarter and declining over the course of 2006. Latin America overtook Europe to become the third most active. Activity in Europe remained fairly stable, but lost ground over the year as a whole. The Middle East and Africa region experienced low and steady activity in the year.

Many different types of packaging and future requirements
For added convenience, portability, portion control and variety, manufacturers increasingly offer sugar confectionery products in multi-packs and variety packs. In terms of chocolate and gum there were little packaging innovations. For chewing gum a squeezable tube was introduced and a cotton candy that turns into chewing gum. The size of the packs goes from large tubs, jars and spheres to pocket-size and handbag-size packets that are very convenient for consumers on the go. Children will continue to be a popular target segment. A greater number of new products, e.g. premium products will be targeted at other demographics such as older consumers. In terms of chocolate the emphasis will lie on the naturally healthy qualities of chocolate and added nutritional ingredients.

Solutions at Bosch Packaging Technology
If you are looking for production and packaging lines that are as special and unique as your confectionery products then Bosch can offer you a wide range of different solutions. Bosch is the sole full service provider for sugar-based goods in the confectionery field: Not only do we provide packaging technology, but also processing technology. We can therefore analyse impacts of problem solutions across the entire production chain and give you advice from weighing in raw materials right up to palletizing. We transform fine ingredients into delicious treats.

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Delightfully Flexible... that Little Helper

Beyond Austrian borders the name Meinl is intrinsically tied to the word quality. For more than 140 years Meinl has served its customers providing them excellent coffees and teas. When they restructured their packaging in 2006, the Viennese coffee experts invested in a PME 4261 BN, because only this machine offers the flexibility that Meinl requires.

The company Julius Meinl has been selling coffee since 1862. In the beginning they sold coffee beans, but customers often burnt the beans while roasting them on their kitchen stoves. When Julius Meinl started to sell freshly roasted coffee, it quickly became popular. The little coffee shop grew into a big retailer. In 2000 Meinl decided to leave the difficult retail industry and went back to the company’s roots, back to the original coffee business. The famous Viennese store “am Graben” was kept and reopened as a delicatessen.

Premium for the Culinary Industry
Besides producing for the retail industry Meinl has become well known as a supplier to the Culinary industry. With a market share of 30 percent Meinl is even the market leader. The coffee is not only freshly roasted for every customer but also packaged to the customer’s preference. When production moved into new business premises, they decided to replace two old packaging lines with one new machine. For over 30 years Meinl has been a satisfied Bosch customer. Of course they considered offers from competitors for their new machine, but only the PME offers the flexibility that Meinl requires for its business strategy, not to mention its unrivalled space-saving design. After visiting two references the proven partnership was resealed in February 2006.
Small and Flexible
The PME 4261 BN allows Meinl to package coffee for various markets, because different grinds of coffee can be run on the single PME, whether it be fine Turkish mocca less fine ground coffee for the US, or whole beans. The machine is also an all-rounder regarding packaging styles. Within a short time the format can be changed, for example from 1000 gram vacuum packs to 250 gram stand-up bags. No matter what the customer wants, Meinl can always be sure that their premium coffee gets the perfect outfit. Furthermore, the valve applicator CVA 2000 V45 provides full aroma protection for the gourmet coffee. The two labellers on the packaging line push flexibility even further. Packs out of non-printed packaging material can be labelled on the front and additionally either on the top or the back. This pays off especially for the packaging of smaller batches. High costs for storing printed packaging materials are avoided, material reel change is required much less frequently.

Convincing Quality and Service
Meinl is thrilled with the machine and very satisfied with the project. Support ran perfectly, from receiving the order to machine commissioning. Despite the tight time frame, the packaging line entered production before the Christmas business began. Meinl’s premium coffee is now packaged on an excellent machine made by Bosch.

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Turkish Delights
Elvan is a family run confectionery manufacturer of high and low-boiled sweets for many markets worldwide. In order to fully satisfy customer needs, the company’s new, continuously operating line relies on Bosch process and packaging technology.
Elvan's clear goals and strategy take commands the highest priority. All in as well as with the environment, employees, sponsors and suppliers, the company’s partnership with its custom- ers, managed by a reliable brand, high quality customer service and years of experience, but also with the support of its motivated, dynamic and flexible personnel. The company’s partnership with its customers, employees, sponsors and suppliers, as well as with the environment, commands the highest priority. All in all, Elvan’s clear goals and strategy take the company across its home borders to sweeten the life of people the world over.

**Innovative technology**
For the diversification of its product line, Elvan chose modern equipment for the production of customer orientated products. Bosch Confectionery was selected for its line competence, as well as its flexible hard sweets extruder, which can manufacture products with up to four different masses (such as liquid, strip, hard-boiled and chewy sweet masses). The versatile BVH 1000 and BVK 2000 wrapping machines were also able to win the confidence of the Turkish company, due to their excellent cutting, wrapping and sealing functions. Apart from Flowpack and double-twist wrap, Bosch Confectionery’s packaging technology is also suitable for many customized product shapes.

**High yield and variety**
The Bosch Co-Extrusion BEK1200MO converts two hard-boiled masses into a single strand in a common extruder head. For an additional filling, an optional fill pump can be used. Up to eight additional strip nozzles on the extruder head provide an incomparable variety of sweet and candy designs. The products to be packaged can be fed to the packaging machines over a variety of systems. For example, the formed, or deposited, sweets arrive over a dosing plate to the packaging system. The vast format and packaging flexibility of the system provides an uncomplicated and fast production changeover. The excellent accessibility, for operation, maintenance and cleaning, allows high machine usage. Consequently, it is easy to set trends and to satisfy even the most unusual customer needs.

**One partner fits all**
Thanks to Bosch’s line competence, Elvan received an entire plant designed for its individual requirements. The line covers all processes from raw material weighing over the continuous cooking system up to packaging. With efficient project management and only one contact, time-consuming and expensive interfaces were reduced, which provided a successful start-up in Istanbul.

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A company with tradition
Since 1952, an Elvan patisserie has been producing a variety of chocolates and waffles in a neighborhood of Istanbul. Over the last 50 years, the Turkish company has developed into a market leader and now exports to more than 70 countries. In 2004, Mustafa Kadioğlu, managing director, decided to start manufacturing confectionery and to invest in a completely new production line.

**Social responsibility**
As a future-oriented company, Elvan attaches great importance to social responsibility. Its goal of market leadership is therefore not only to be reached with a reliable brand, high quality customer service and years of experience, but also with the support of its motivated, dynamic and flexible personnel. The company’s partnership with its customers, employees, sponsors and suppliers, as well as with the environment, commands the highest priority. All in all, Elvan’s clear goals and strategy take the company across its home borders to sweeten the life of people the world over.

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Top quality right through to packaging
"Créa d’Or – the fine biscuit collection with exquisite ingredients for exclusive moments with a hint of extravagance."
This is precisely the promise given by Midor in respect of product quality. The demands on the packaging process are correspondingly high. Only perfect biscuits must be placed in the trays without any damage whatsoever, in observance of critical hygiene regulations. The goods are always produced and packed fresh. The company must therefore also be able to respond to requests at short notice. Manual packaging is not an option since the industry is subject to great cost pressure as a result of rising commodity prices. To ensure increased productivity, Midor has been practising fully automated packaging with the aid of robots for many years. However, with this project, the challenges lay in the detail, which meant that the company also sought the special expertise and experience of a packaging expert.

**Gentle product handling challenge**
Neither the pure production rate nor the number of formats are unusual for this project. More than 800 biscuits per minute and 18 different products are common figures for modern, vision-based systems.

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This motto of Midor AG accurately describes the result of the collaboration between two trend-setting Swiss companies. As the leading manufacturer of biscuits and ice cream, Midor has provided a guarantee for products for more than 75 years which meet the highest quality requirements. When it comes to packaging for these delicate biscuits, Midor relies on state-of-the-art Swiss robot technology from Sigpack Systems.
robot packaging lines. But only products which can be picked safely and gently can also be packed without any loss of quality. The exquisite biscuits from «Créa d’Or» have a number of vagaries especially in this respect. For example, the wafer-thin «Edelweiss» biscuits are both crispy and fine but also very fragile. If just one of the 32 «Edelweiss» biscuits contained in a single pack is damaged while being inserted, it will render the entire container unsaleable. Or take the sandwich biscuit «Linzer». The jam on the surface is still liquid immediately after baking. And finally «Vanilla Kipferl», with their distinctive characteristic of being covered with icing sugar. Conventional vacuum devices would bond with the jam or suck up the icing sugar. Although these problems can be solved by mechanical grippers, these have the disadvantage of needing extensive cleaning while also being comparatively critical in function. In addition, adjustment of the force of the grip on the product is relatively imprecise. The Airflow tool, a gripper developed and patented by Sigpack Systems especially for products with a crumbly or sticky surface, offers a far better solution. Products are enveloped in an airflow and gently lifted with the aid of the force generated by variable flow speeds. To increase the picking performance, a stack of several biscuits can even be created inside the gripper. For the «Vanilla Kipferl», the company uses a gripping device with small rubber fingers. These fingers are mounted onto a membrane which, depending on the internal pressure, arches inward or outward, causing the fingers to open or close accordingly. Based on this principle, the force of the grip is distributed equally across all fingers. Since each type of gripper used has the same interface to the robot and is activated through vacuum, the changeover can be effected within a matter of minutes. Cleaning too is very safe and easy since no mechanically moveable components are used.

Better «Good and many» than «Bad and few»...
The grippers represent the philosophy of the Sigpack Systems packaging lines – safe and efficient functioning with little maintenance. For example, Sigpack Systems uses container denasting devices with two independent heads per infeed as a matter of principle. Because experience has shown that even expensively produced containers regularly cause malfunctions. If one of the heads communicates a problem, the other denasting head automatically takes over interruptions to the flow of containers and resulting product overflows are reliably avoided. The ability to respond immediately to changing external conditions is also essential for efficient operations. For instance, baking processes are subject to natural variations. Control by robots therefore offers the opportunity to adjust all key setting values online without interrupting production as well as dependent on set user levels. Overall, this allows greater product tolerances without any detrimental effect on the insertion quality. However, the key players are the highly dynamic Sigpack Systems Delta robots. They are known for their maintenancefree and robust design, which guarantees many years of fail-safe and reliable operation. All in all, Midor is delighted with the function of the line. That’s not surprising, since it not only meets the required 98.7% insertion quality but even exceeds the performance targets. In this case, the typical Swiss virtues – highest quality and precision as well as a love for detail – complement each other perfectly. Simply: «Truly Swiss – Truly excellent».

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1 All eight Delta robots are operated through a central touch panel, on which process parameters can be optimized also during production.
2 Depending on the product, special optimized gripper types are used to avoid damaging the exquisite biscuits in any way.

Precise and gentle placing of the tender and crispy almond biscuits – up to 100 times per minute.
Delicious Oatcakes

Whether as a snack food for lunch, or as an evening nibble with some cheese and a glass of wine, Simmers’ traditional oat cakes are exported all over the world, from its manufacturing facility based at its home in Edinburgh, Scotland.

Coinciding with the anniversary of a management buy out ten years ago, Simmers of Edinburgh Ltd invested in a factory extension to support a new manufacturing line dedicated to its traditional Nairn’s Oat Cake range. Sigpack Systems AG was the partner of choice for Simmers, providing a line that was able to delicately handle and package these easily broken products.

Delicate handling

The fragile, delicate oatcakes make high demands on a system when they need to be transferred from the oven exit into an airtight, pillow pack wrap style. The oatcakes are packaged in individual piles before being safely delivered to secondary packaging. This function has to be carefully controlled to eliminate any damage and breakage of the products.

Product flow

The oatcakes arrive 16 across the oven band, are gently reduced on a 2:1 reduction system and presented to two downstream packaging machinery legs, each having four lanes. The oatcakes are gently stacked into a vibratory system, which provides a small amount of accumulation for downstream machine stoppages and additionally provides individual pressure control on the stacked columns of biscuits to ensure no damage to the product. The product then enters the ZZP magazine feeders, which sit next to the infed chain of the HBM pillow pack wrappers. The products have to be carefully stripped from a vertical stack by means of a flexible programmable counting system, complete with intelligent lane balancing. The column is additionally gently braked and held during the stripping operation, with a smart ZZP base plate mechanism which releases pressure on the individual biscuit during the stripping and pushing operation of stack building in the wrapper chain. The HBM pillow pack wrapper groups each individual stack in the chain and consistently provides airtight packaging, which is vital as these products are susceptible to moisture during transit to the consumer.

Flexibility and changeover

The system is also very flexible and formats are easily changed by means of the touchscreen when changing between biscuit counts, with no change parts required. Simmers Managing Director, Mark Laing, said, “Here at Simmers, we ensure that the quality of our products are second to none and this is reflected in our capital purchase plans. We always ensure that we purchase equipment from reputable suppliers, who we know fully support our business ethics. In Sigpack Systems, we see a company that is proud of its equipment and its performance and this is reflected in the build and quality of our machinery on site”.

Local market support

A key factor when selecting capital equipment from overseas suppliers is their presence in the local market. The UK boasts the largest installed base of equipment in the world, within this industry sector, and is a traditional home for Bosch Sigpack Systems Packaging Machinery. From its base in Derby, all Bosch Packaging Machinery is supported for new machinery sales and service.

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Only the best for baby

In 2005, Bosch Packaging supplied a Servac TFA 4830 line to a renowned European baby food manufacturer. With the new, aseptically operating line, the baby food is no longer filled into jars but into cups. This eliminates expensive terminal sterilization in a retorting unit.

Thanks to aseptic filling, baby food can be very gently sterilized in an automatic processing line. This preserves, to the highest extent possible, the valuable but extremely sensitive vitamins and nutrients in the packaged product. Furthermore, the line’s superior level of hygiene permits a very extensive shelf life, of up to 12 months, without refrigeration. Bledina/Danone, a highly popular manufacturer of baby food for many years, has been achieving such shelf lives.

From jar to cup
The most recent line has been in operation since the spring of 2005, with an output of 43,200 cups per hour corresponding to a production volume of about 100 tons per day. The use of low-cost roll material for the plastic cups is more cost-effective than the previous jars. The EVOH-barrier, integrated into the film, provides optimum protection to the delicate product in the cup, even during longer storage time without...
The installed piston filler ensures superior precision filling. Even when filling difficult products, such as highly viscous preparations of baby food with particles, a filling accuracy of ±2 grams per cup is achieved. High filling accuracy results in big cost savings for the manufacturer because it reduces, to acceptable limits, the chance of survival for dangerous microorganisms. As a result, the piston filler totally satisfies the needs of the user and the appetite of the little gourmet.

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