

packazine

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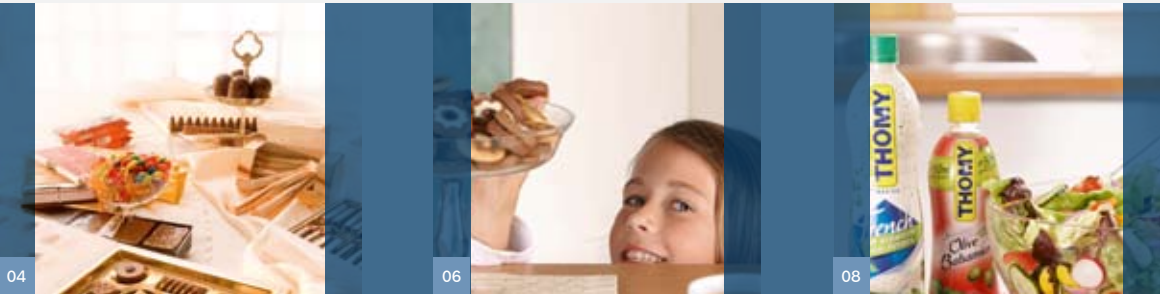
BOSCH

Invented for life



Nestlé | Superior quality for outstanding taste
Elegance | Reaching for the stars
Norwood | Ready for operation in 7 days

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Editorial

Dear Readers,

The trend towards multi-functional production lines is gathering even more momentum. As manufacturers have to deal with shorter and shorter product life cycles and need to introduce products to the market without delay, they rely on equipment with standardized modules and high flexibility.

A quick and flexible changeover, from one product to the next, is a requirement we see more and more in today's market. In addition, many customers like to focus on their core competence. They expect from us the competence for processing technology and packaging. Therefore our 'one-stop-shopping' concept offers reliable solutions from a single source.

Friedbert Klefenz
President
Bosch Packaging
Technology



Today, Bosch Packaging Technology is a full-range supplier and produces added value for the industries we work in. That customers worldwide trust in us is evidenced by our commercial success: compared to the previous year we managed to increase our sales volume by 14 percent, in 2007, to a total of 650 million Euros. In Asia alone, sales rose to over 100 million Euros. In the future, we expect the willingness to invest to remain consistently high in Asia, Latin America and Eastern Europe, especially with a view to increasing automation.

Bosch Packaging Technology is one of the leading suppliers for single machines and complete solutions. We consistently meet customers' expectations with high quality solutions and service, and our innovations lead the way. In this current edition of our customer magazine, you will find many of our recent, successful customer projects. You can also experience our system and line competence personally by coming to see us at the most important exhibition in North America: PACK EXPO in Chicago. We'll look forward to meeting you there.

I hope you enjoy the reading.

Friedbert Klefenz



Premium packaging for premium confectionery

Sweet Trends

Creating Opportunities in Confectionery with Packaging & Processing Technologies

Bringing premium branding to mass-market goods is a growing trend that is definitely building momentum. The increase in demand for goods that are of higher value but which still find a mainstream market is referred to as “mass premiumization”. This trend is evident in a wide range of consumer goods including jewelry, clothing, wine and spirits, as well as candy and chocolates.

But how do you get a product to be perceived as a luxury item, while still appealing to the masses? When it comes to confectionery products, the answer is in the packaging. Suppliers of packaging and processing equipment are working with confectionery brand owners in order to help identify new opportunities.

Mass Premium

Presentation can often define the value of a product and position it as a non-commodity item. Confectionery packaging therefore demands a greater investment by brand owners in order to achieve premium positioning, while still fulfilling the basic roles of quality protection and extended shelf life. As a result, packaging and processing equipment suppliers, such as Bosch Packaging Technology, are becoming a key part of the production process by

offering both skilled experience and new technologies. With such an informed perspective, producers are able to strike the right balance between technologies that add value to product lines and those that increase efficiency on the plant floor in order to meet mass demand.

The impact of premiumization does however extend beyond packaging style. Many premium items require delicate handling in order to avoid marks on the product, which could adversely effect the consumer’s perception of quality.

One new technology, which addresses premium confectionery products on a wide scale, is the new **TwinHead BVH 1800 TA**, double-twist wrapping machine from Bosch Packaging Technology. This machine is ideal for filled and fragile hard candies. It has fewer interfaces than traditional twist-wrapping machines and a large disk infeed, which minimizes the centrifugal force as much as possible. Brushes, distributors and deflector plates have also been eliminated from the design to further reduce impact on the product.

With many years of industry experience, Bosch Packaging Technology offers advanced processing technologies and packaging procedures that protect product quality and also increase efficiency. For example, Bosch Packaging Technology uses robotics in order to

handle delicate products. Robots are able to maintain the gentle nature of hand packaging while still increasing volumes.

Conclusion

Overall, the confectionery industry is undergoing significant changes. As brand owners shift their strategies to respond to these changes so too must suppliers to the industry. Many suppliers are looking ahead at the trends and are adjusting their own technologies in order to meet the market shift. In other words, the next creative idea may not be from a branding guru but rather a packaging machinery engineer.

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The Pack 201 Reaches for the Stars in the Middle East

Tevopharm was founded in 1959 and has almost 50 years experience in providing packaging machines, distribution and infeed systems. Tevopharm has been part of Bosch Packaging Technology since 2003 and this has given significant advantages. By collaborating closely with other companies in the division, Tevopharm supplies solutions which combine years of experience and mastery across a wide range of packaging applications.



One of the successful results of collaboration within Bosch Packaging Technology is the **Pack 201**, which was introduced in 2006. With such cooperation between companies within Bosch Packaging Technology, the development of the **Pack 201** was able to draw on experience and application know-how from around the world.

The machine is easy to maintain, using the fewest number of parts possible. Economical inline, cross feeders and automation controls form an integral part of the design philosophy of this machine. A stainless steel execution is

available for applications requiring a high level of sanitation, such as frozen and chilled food. The **Pack 201** is suitable for wrapping a great variety of products and therefore meets the needs of many different customers.

One such customer is Elegance Confectionery, a food processing company providing high quality confectionery products. Elegance started operating in Syria in 2005, offering high quality wafers. In less than three years, Elegance became a leading confectionery producer in the region. A great variety of wafers is

- 1 Factory Floor at Elegance in Syria
- 2 Automatic Feeding System
- 3 **Pack 201** wrapping machines
- 4 Wrapping the products
- 5 Products, ready to eat





offered to customers in both the Middle East and Europe. There are four main products in this group: Today, Two Days, Elegance and Tonky.

After its success in wafers, Elegance started a biscuit line in 2008, with a very special product being offered for the first time in the Middle East: 'Elegance Stars'. For the production of this round biscuit, with chocolate and cream, equipment from different European companies is used. Elegance has bought two **Pack 201s** for the wrapping of the products.

How does the machine work?

The products are wrapped in groups of three stacks of two pieces, which are formed in front of the folding box. The stars are manually loaded into the vibrating infeed systems, which transport the products to the chute feeders. Both machines are equipped with four chute feeders, which are fed by two vibrating infeed systems. Through the chutes, the products are automatically fed into the infeed chain of the machine. An inventive manual switch enables the customer to easily choose for a large or small pitch in the pusher pin distance.

Manual replacement of pusher pins with different product dimensions is therefore not required.

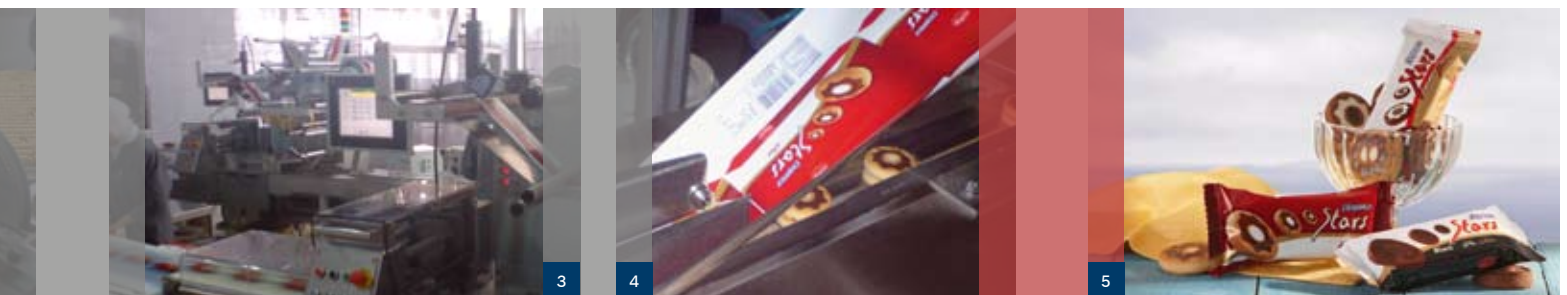
After only four months of production, the line is running 24/7 and wrapping 200 packs per minute on each of the two **Pack 201s**, with the Elegance Stars already being exported to Jordan, Lebanon, Tunisia, Algeria and Bahrain.

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- 1 Nestlé Thomy Plant in Basel, Switzerland
- 2 Bosch Filling Machine *FLK 8101 CIP Plus*
- 3 Filling of French Dressing
- 4 Thomy products ready to eat





Thomy & Bosch

Superior Quality for Outstanding Taste

For more than 140 years, whether it is soups, sauces and gravy, baby food or coffee, Nestlé has stood for delicious treats. The Nestlé brand Thomy, too, is noted for the highest quality and, for this brand, Nestlé relies on Bosch for the optimal filling of popular Thomy products.

Tradition means quality

Thomy, which has been part of the Nestlé group since 1971, is one of the best and most popular delicatessen brands in Germany and Switzerland. Thomy's product range includes, for example, salad dressings, mayonnaise, mustard, cooking oil, ketchup and tomato puree. Thomy products' popularity is based, first and foremost, on the unique taste experience. Other reasons that customers are

happy to come back to Thomy again and again are the variety of products and the fact that they are easy to use.

Thomy – ideal filling line

As early as 1907 the company owner Fritz Thomi-Schaad launched a practical novelty onto the Swiss market by filling mustard into stoneware pots. Today, the successful and practical PET bottles are being used, amongst others. To ensure





Bosch Filling Machine
FLK 8101 CIP Plus

high product and packaging quality for the future, Nestlé decided on Bosch's linear, 10-position piston filling machine, the **FLK 8101 CIP Plus**, which has the capacity to fill up to 100 bottles per minute. With a filling volume of up to one liter, the **FLK** is ideally suited for Thomy products with sizes of 450 to 750 milliliters.

Filled to perfection

Any amateur cook can tell you that even the best mixed vinegar and oil will separate quickly and therefore they are kept in two separate product tanks in the **FLK**

and are filled one after the other during the filling process. This way the mixing does not occur until inside the bottle, which ensures a consistent product quality. The pumps' forceful servo drives allow for adjustments to the filling ratio at a moment's notice.

Consistent cleaning

Another important feature of the **FLK** is the well thought-out cleaning in place (CIP) system. All parameters, such as cleaning agents, temperature, pressure and time duration, can be saved as product-specific cleaning programs to

ensure optimum cleaning of the filling machine in the shortest possible time. All product-handling parts are exposed and washed in the process. The cleaning process also includes all sealing elements. By exposing the pistons from the inside to the outside contamination is avoided when returning them to their operating position. As the cleaning processes can be exactly reproduced, the whole system can be completely validated. It is a concept which convinces through its clarity and offers the necessary safety, especially for products such as food, pharmaceuticals and cosmetics, which have high demands on the cleaning process.

Convincing laboratory tests

During the run-up, in laboratory tests at its factory in Viersen, Bosch was able to prove that the **FLK** more than met the high requirements for Thomy's top-quality products. The results convinced Mr. Schneider, Technical Manager at Nestlé, and thus Bosch received Nestlé's order in August 2007.

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RobotLoader benefits Protein Industry

Even though automated processing and packaging machines for the protein industry have been around for some time, one production step has mostly been carried out by hand - the placing of products into the packages. Automated tray loading has always proved difficult, due to high hygiene standards and irregular product shapes and surfaces. However, in the quest for a solution to this problem, collaboration between CFS and Sigpack Systems, a Bosch Packaging Technology company, has resulted in the development of the **CFS RobotLoader**.



The growing number of single and two-person households has led to a shift towards smaller, single portions for fresh and frozen foods. When manufacturing these convenience foods in Western Europe and the US, apart from labor costs, factors such as standardization, product waste and production flexibility are major influences in deciding strategies. The application of HACCP hygiene standards, which are being harmonized throughout Europe, is also now playing an increasingly important role in decision-making, as the highest priority is placed on protecting consumers from dangers such as listeria bacilli.

Automated loading

The experts at CFS and Sigpack Systems were aware that unconventional methods would be needed to develop an automated solution for tray loading in the protein industry. The result was the **CFS RobotLoader**, an innovation that has changed the view of packaging in this sector. This new concept fills fresh meat, poultry, meat products, cheese and cold

cuts cleanly, reliably and quickly into precast or thermoformed trays.

At the core of the system is Sigpack Systems' Delta robot technology, which has been used successfully in a wide range of applications, such as the handling of deep frozen and chilled products, baked goods, chocolate and biscuits, and the top loading of non-food items such as pharmaceutical and cosmetic products.

Special challenges

The production conditions for deep frozen foods create special challenges for the robots, due to the cold and damp environment and the strict hygiene standards. Therefore, the electronics of the machine were specially insulated. Furthermore, the robot and the complete frame of the **CFS RobotLoader** are made from stainless steel to allow for effortless cleaning at any time. Cleaning is also facilitated by sloping surfaces and an open design, which encourages drainage of the cleaning fluid.

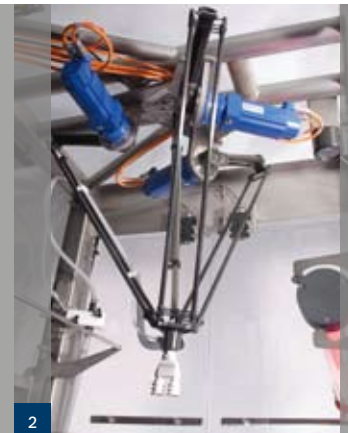
Configuration of the CFS RobotLoader for tray sealing and thermoforming

Together with the **CFS TwinStar®** for tray sealing applications, the **CFS RobotLoader** contains up to eight Delta robots in one line, which are synchronized perfectly with the packaging machine to offer highest system performance and reliability.

For the packaging of fresh and deep frozen products into deep-drawn trays, the **CFS RobotLoader** can be combined with the **CFS Powerpak** and the **CFS PowerPak^{NT+RT}** thermoformers. The almost full integration into the placing area of the thermoformer facilitates the accessibility and cleaning of the whole system.

The Delta robots' vacuum grippers handle a wide variety of products from sausages, frozen burgers, meat and roulades to chicken drumsticks and wings. They are also easy to clean, low maintenance and easy to adapt to new irregular-shaped products. Their low weight allows for high speeds. For sliced

- 1 Continuous inline-production with up to 800 products per minute
- 2 Newly developed Sigpack Systems Delta robot with hygienic design – easy to clean, safe inspection
- 3 Precise and gentle loading for an attractive and versatile product presentation
- 4 **CFS RobotLoader** for tray-loading in a unique hygienic design





Loading of pre-formed and breaded schnitzel into deep-drawn trays

portions and product stacks enhanced mechanical gripper tools are available.

Partnership with customers

The CFS lifecycle performance philosophy is the commitment behind the introduction of the **CFS RobotLoaders**. “Lifecycle performance is our driving force and offers customers the best possible solution. The partnership with the customer is an essential part of the philosophy of CFS,” says Joachim Hajek, CFS product manager.

CFS is located in Bakel, Holland, and specializes in achievement-oriented solutions for the food industry. Over the last year, Siggpack Systems has worked closely with CFS to present reliable, one-stop-shopping solutions for complete processing and packaging lines, along with excellent pre- and after sales services.

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Astor – Efficient Assortment by Demaurex

For the second time in two years, an historic chocolate company has demonstrated its confidence in the fast and flexible Astor assortment solution by Demaurex, a Bosch Packaging Technology company.

Delacre, a United Biscuits company with more than 130 years of experience in chocolate manufacturing, has two factories located in Lambermont, Belgium and Nieppe, France, which specialize in biscuits and chocolates. The Nieppe factory alone produces 30 million packs each year, which, with over 80 different products, are mainly marketed as assortments.

Demaurex, with more than 25 years of experience in the robotic and food packaging field, has developed its Astor Assortment Placer, based on Delta Robot technology, in order to provide new packaging solutions with a rapid return on investment. Today, more than 1000 Demaurex Delta Robots are installed worldwide.

Project requirements

In order to meet the needs of Delacre and its assortments, Demaurex was given the complex task of managing 15 different blister pack sizes with a minimum of 99.5 % efficiency for each robot. Additionally the blister packs needed to be filled with up to 20 different products while maintaining high speeds. This was a major challenge due to the complex shapes and delicate chocolate coatings of the biscuits.

Operating principle

The Astor Assortment Placer can pick and place up to eight different biscuits in one blister pack. In this project, a total of eight robots were installed, picking products from a single infeed conveyor.

The Delacre employees can place the products on the infeed conveyor either by hand, sliding them out of trays, or dumping them out of containers. The products can be placed in any direction on the conveyor, as long as they are not stacked on top of each other.

The ability of the Astor Assortment Placer to recognize different products and selectively pick up the correct ones is made possible by a vision system. The vision system can even recognize if the product is upside down, or broken. By not picking the damaged product the overall packaging quality is improved. The images from the vision system are processed in real time, enabling each robot to pick up the precise product



- 1 General layout of the Astor line
- 2 Incoming of different kind of biscuits to the cells of the Astor
- 3 General layout of the Astor line
- 4 Special dual-pick gripper
- 5 View of the BAGÉ vibratory unscrambler with chocolate biscuits
- 6 Incoming of chocolate biscuits from the unscrambler to the robot cell



without stopping the production flow. The vision system is also able to tell the robots how to place the last product in each cavity, e.g. always face up. The blister packs come from a tray denester, which separates the blisters on a two-lane conveyor. Instead of using guides, in this project an additional vision system was installed, which allowed faster production changes. The vision system transmits information on both position and location of each blister to the robot motion controller and thus assures the correct placement of products in the blister packs. It even makes the simultaneous conveying and filling of two different kinds and sizes of blisters possible. Another unique feature is the pull-nose system located at the end of the

infed belt, which allows the continuous picking and placing of products into the blisters, on one or two lines at a time.

Tools

Because of the great variety of products in this specific project, the grippers used here were specially designed in order to offer maximum efficiency during the pick and place process without changing tools.

Efficiency

With one product for each of the eight robots in this project, the Astor Assortment Placer can reach 130 products per minute in mono-pick mode, and 150 products per minute using a specially designed dual-pick gripper.

The Demarex Astor Assortment Placer represents a real opportunity for companies looking to improve their manual packaging processes. Companies can benefit from an intelligent, flexible solution that increases production speeds and meets food industry hygiene requirements at the same time.

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Versatile Packaging the Natural Way

Natra SA, a leading international manufacturer and marketer of cocoa and chocolate derived products, with its headquarters in Spain, has installed a new packaging line created by Sigpack Systems, a Bosch Packaging Technology company. The company's products are currently sold in 24 of the top 30 most important European retailers and it focuses in private-label and novelty products.



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In 2004, Natra acquired Chocolates Zahor which has been located in the Basque city of Oñate since 1946. Since then Natra stated its intention to double annual production capacity. It was looking for a line with an operational speed to deliver the extra output, which was extremely versatile, and which would be able to handle endless configurations of formats with a minimal requirement for downtime and changing parts. Christened the “Linea Hurry Up”, the new packaging line for Natrazahor in the

plant at Oñate, was installed in the wake of the Natra acquisition. Jesús Cortabarría, Technical Director of Natra, is responsible for all six Natra production sites across Europe. He explained his reasons for selecting the Sigpack Systems option and talked about his experience: “Sigpack Systems is renowned for having successfully undertaken numerous similar projects in the past and it successfully completed this project. The excellent team of mechanics and technicians worked with us and

provided informed advice throughout; a Sigpack Systems fitter can be my adviser anytime! Sigpack Systems always gives first class support and has enabled us to optimize our new pack styles.”

At the start of the line, a **DAA** storage unit takes products coming directly from the cooling tunnel following mold-ing. Chocolate bars can be stored for almost 20 minutes. As a result, the **DAA** operates as a buffer system negating the effects of production fluctuations.



- 1 Natrazahor located in the Basque city of Oñate – home of the new packaging line
- 2 Primary packaging – efficiency at high speed
- 3 The cross sealing device guarantees constant quality of each sealing
- 4 One operator controls the whole line
- 5 Multi-packs on their way to the final packaging and the consumers



Questions to Jesús Cortabarría, Technical Director, Natrazahor

What were the main features you were looking for in this line?

Jesús: We were looking for a new machine that can guarantee system efficiency and flexibility in packaging styles.

What did you like most in working with Sigpack Systems?

Jesús: The awareness that Sigpack Systems will finish the job even if there

are problems coming up. They do not just give positive answers immediately just to calm the customer down.

Why would you propose Sigpack Systems to your partners?

Jesús: Sigpack Systems provided good project progress with good support at all times, and professional advice for the future.

The unit leads to the **HSM** pillow-pack, followed by a **HBM** multi-pack machine. Through the close collaboration with the customer, this leg is capable of producing 860 packages per minute (PPM), greatly exceeding the contractual agreement of 600 PPM using heat seal technology. The line, with 95 m/min speed of foil, is probably the quickest heat seal pillow-pack application in the world.

The line was created for double bars (two bars in one flow wrap) and wraps up to 930 bars (465 flow wraps) per minute. With a speed of 130 m/min, the conveyor is one of the fastest created by Sigpack Systems. The acquisition of this new machine has delivered a technological quantum leap for Natrazahor. The investment level has almost doubled, however production has become more cost-efficient.

Together, the machines deliver perfect, standardized packages each and every time. They are built for continuous operation, being easily adjusted to suit various product configurations and are successfully integrated into existing lines.

In the Natrazahor example, the systems are being used to pack 20g chocolate bars as either single products, or two-

finger multipacks of five or eight, or 30g bars in two-finger multipacks of three, four, five, six, eight or ten.

Jesús Cortabarría concludes “We can now respond more quickly to the changing market, launching new products and packaging formats in minimal time.”

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Quick Delivery Saves the Day

Norwood Promotional Products is one of the leading suppliers of imprinted promotional products in the United States. Recently, the Norwood Souvenir Writing Products Facility in Cedar Rapids, Iowa, celebrated its 100th year of manufacturing custom-printed writing instruments.

Unfortunately, in June 2008, the “once in a thousand years” flood that swept through Iowa totally devastated the facility. However, with a quick call to Doboy, a Bosch Packaging Technology company, Norwood was able to replace key equipment and get production back online, in a different facility, in only a few days.

Prior to the flood, Norwood had been wrapping writing instruments in polypropylene, heat-sealable film with a **Stratus** Horizontal Wrapper from Doboy.

The **Stratus** wrapper is a cost-effective, flexible, easy-to-use and compact piece of equipment that features the same servomotor and PC technology found in high-end flow wrappers. The machine is designed for a wide variety of products including hardware, bakery, candy, housewares, and many other industries.

A quick delivery

After the flooding of the Cedar Rapids plant on June 11th, Norwood needed to resume production as quickly as





possible. It decided to temporarily relocate its Souvenir Writing Products operations to a similar facility in Red Wing, Minnesota. After consulting with a Dobby agent, Norwood made the decision to purchase a new **Stratus** wrapper, based on the previous performance of the machine and Dobby's promise of an expedited delivery and installation. The new **Stratus** was ready for an on-site factory checkout at the Dobby facility in New Shell Lake, Wisconsin on Friday, June 20th and was installed and ready to wrap in the Norwood plant the following Monday, only seven business days after the original request.

Flexibility was key

Flexibility was key to the decision of Norwood to purchase another **Stratus** wrapper. Numerous sizes and styles of pens, pencils, and highlighters, from five to six inches in length and from 1/2 to 3/4 inches in diameter are manually fed into the machine. Changeover, from one set of product parameters to another, is quick and simple with an adjustment of product guide rails. "The flexibility of the **Stratus** allows us to offer a wide variety of writing instrument styles to our customers," said Doug Taylor, production manager at Norwood. Additionally, the control system can store up to twenty product set-up configurations and a compact design ensures production layout flexibility.

Possibility to speed things up

Currently, the **Stratus** is wrapping writing instruments at 40 to 50 products per minute with a manual infeed. However, Norwood is currently considering the

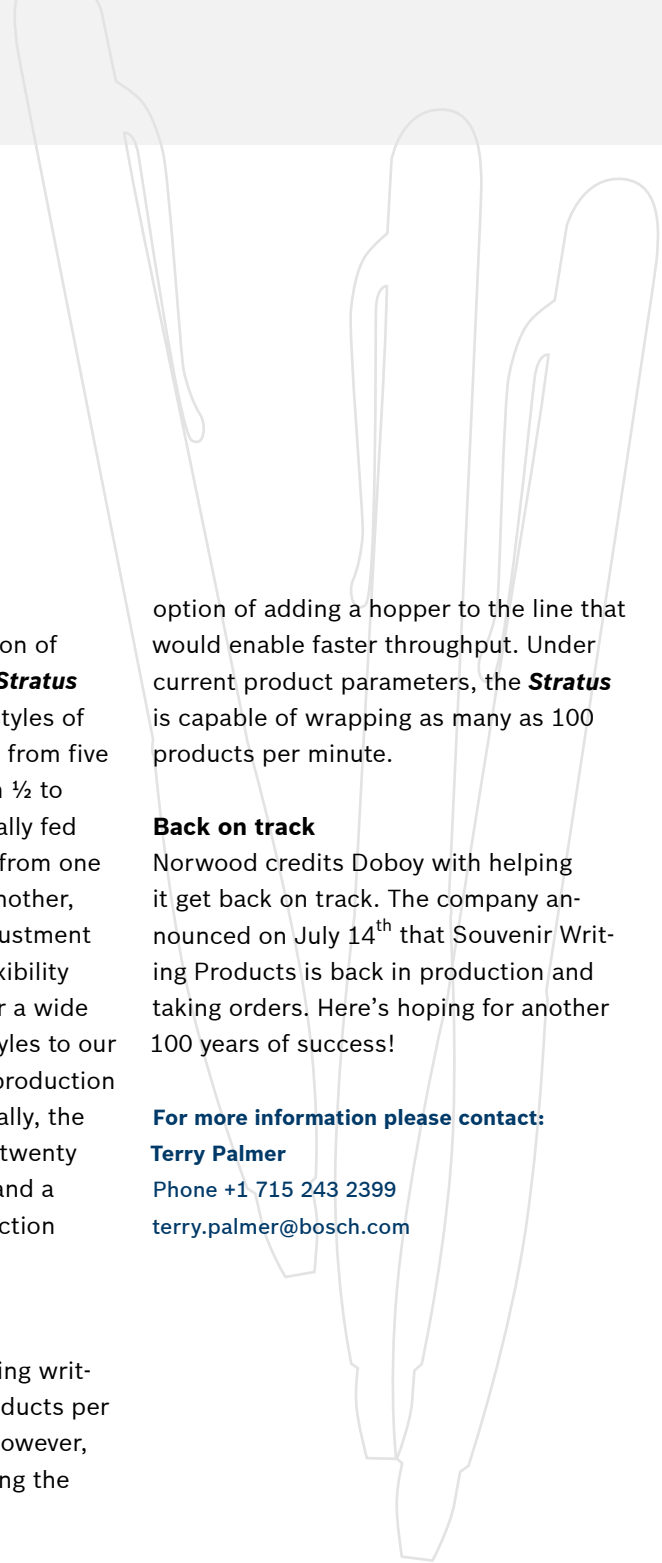
option of adding a hopper to the line that would enable faster throughput. Under current product parameters, the **Stratus** is capable of wrapping as many as 100 products per minute.

Back on track

Norwood credits Dobby with helping it get back on track. The company announced on July 14th that Souvenir Writing Products is back in production and taking orders. Here's hoping for another 100 years of success!

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- 1 The **Stratus** is an economical, flexible, easy-to-use and compact horizontal flow wrapper
- 2 The **Stratus** wraps writing instruments at Norwood's Red Wing, Minnesota facility

Events Food 2008/2009



Date	Events	Location	Branch
09. – 13.11.2008	PackExpo International (PMMI)	Chicago, USA	all
17. – 21.11.2008	Emballage	Paris, FR	all
19. – 21.01.2009	NW Food Processors	Portland, USA	Food
27. – 30.01.2009	Upakovka	Moscow, RUS	all
28. – 30.01.2009	IPE (Poultry)	Atlanta, USA	Food
01. – 04.02.2009	ProSweets	Cologne, DE	Confectionery
23. – 26.02.2009	Gulf Food	Dubai, UAE	Food
10. – 12.03.2009	CFIA	Rennes, FR	all
10. – 13.03.2009	Anuga Food Tech	Cologne, DE	Food
24. – 28.03.2009	Ipack IMA	Milan, IT	all
01. – 02.04.2009	Empack (easyFairs)	s'Hertogenbosch, NL	all
22. – 24.04.2009	United Fresh Tech	Las Vegas, USA	Food
27. – 29.04.2009	PMCA	Hershey, USA	Food
11. – 15.05.2009	Hispack	Barcelona, ES	all

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Date	Events	Location	Branch
09. – 13.11.2008	PackExpo International (PMMI)	Chicago, USA	all
12. – 14.11.2008	ChinaPharm	Beijing, CN	Pharma
17. – 21.11.2008	Emballage	Paris, FR	all
25. – 28.11.2008	PharmTech	Moscow, RUS	Pharma
21. – 22.01.2009	Pharmapack	Paris, FR	Pharma
27. – 30.01.2009	Upakovka	Moscow, RUS	all
29. – 30.01.2009	Interphex	San Juan, USA	Pharma
10. – 12.02.2009	MDM Show	Anahelm, USA	Pharma
10. – 12.03.2009	CFIA	Rennes, FR	all
17. – 19.03.2009	Interphex	New York, USA	Pharma
24. – 28.03.2009	Ipack IMA	Milan, IT	all
01. – 02.04.2009	Empack (easyFairs)	s'Hertogenbosch, NL	all
22. – 24.04.2009	Expofarma	Mexico City, MX	Pharma
11. – 15.05.2009	Hispack	Barcelona, ES	all
11. – 15.05.2009	Achema	Frankfurt, DE	Pharma

Events Pharma 2008/2009