

02/2015

UPDATE

NEWS OF BETTER PACKAGING

FOCUS

Interview with Volker Gerloff about the most important trends in the market for labelling and marking technology

INNOVATIONS & PRODUCTS

Entry-level model R 085 has proven itself in the market

FURTHER TOPICS

Interview with Guido Spix about the opportunities, challenges and solutions for Industry 4.0

BEYOND PACKAGING

MULTIVAC is investing in a new Logistics Center in Wolfertschwenden



2 NEW FORMATS: APP AND ONLINE
<http://update.multivac.com>





Dear Reader,

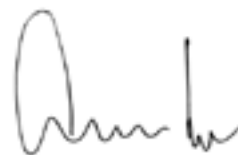
We are delighted to be able to present to you once again at FachPack 2015 a range of innovative packaging, labelling and marking solutions for food, life science, healthcare and industrial products. Since the focus theme at this year's FachPack is "Marking & Labelling", we too will be addressing the trends in the labelling and marking of packs in this edition of UPDATE. These include interruption-free labelling within packaging procedures, as well as the application of detailed product information for complying with legal regulations on consumer protection. MULTIVAC Marking & Inspection has developed solutions for these requirements, and it is continually expanding its range of products. The latest developments also include the new inline labellers, which we will be presenting to you on our stand at FachPack.

Industry 4.0 is currently a much discussed topic - and not just in the areas of labelling and marking, such as product traceability. As a leader in innovation, we seized on the topic of Industry 4.0 at an early stage, and today we offer scalable solutions, which make packaging procedures even more efficient and at the same time highly flexible. We would like to make your entry into Industry 4.0 easier with solutions that are technically and commercially practical to manage.

I am also delighted to be able to announce the building of our new Logistics Center at the Wolfertschwenden site is rapidly taking shape. It is planned that this will be put into operation in the second quarter of 2016, and we are working on the basis that the Logistics Center will be integrated and in full operation in the second half of next year.

These and other topics are presented to you in our current edition of UPDATE. Our customer magazine has also come up with a new innovation: with immediate effect you can download UPDATE as an App on the usual platforms or follow it as an online magazine on <http://update.multivac.com>.

Whatever format you choose, I wish you a lot of enjoyment while reading it.



Yours sincerely,
Hans-Joachim Boekstegers

FOCUS

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MULTIVAC Marking & Inspection has developed a 2-way dispensing edge for its labelers, which offers customers the following advantages: If a pack is to be labelled, the release edge is used. However, if individual labels are to remain adhered to the backing strip, which is wound up after the labelling process, then the deflection face is activated. This function is particularly important when, for example, the print layout is changed or a label has been identified as incorrect. Not only does this save costs, but it also makes the labelling process more simple and more reliable.



MULTIVAC DONATES TOMBOLA PROCEEDS TO SOCIAL INITIATIVES

Handing over the donation: In 2015, MULTIVAC also donated the proceeds from its traditional Christmas tombola to two charitable associations in the Allgäu. Christian Traumann, CFO of MULTIVAC, handed over the donation at the end of March at the company's headquarters in Wolfertschwenden.

The donations in the total amount of 3,500 euros benefited the Allgäuer Hilfsfonds e.V. aid fund and the regional Allgäu branch of the accident assistance organisation, Johanniter-Unfall-Hilfe e.V. The two organisations were suggested by the MULTIVAC Works Council. Crucial to this decision was not only their regional presence, but also the fact that they do not receive any state aid for their charitable work. "We would like to recognize and support the important work of these social initiatives with our donation. They become involved in many different ways on behalf of people in our region, who have fallen into hardship and need help," says Christian Traumann.



Handing over the tombola proceeds (from left to right): Jessica Ihm, MULTIVAC's youth and apprentice representative; Peter Hausmann, Chairman of MULTIVAC's Works Council; Markus Adler, member of the regional board of Johanniter in the Allgäu; Christian Traumann, CFO of MULTIVAC; Katharina Lang, MULTIVAC's youth and apprentice representative; Simon Gehring, Treasurer of the Allgäuer Hilfsfonds; Manfred Schafroth, Head of Personnel at MULTIVAC

MULTIVAC RESALE & SERVICE IS ORGANISING A CUSTOMER EVENT IN OCTOBER 2015

Guests are very welcome: On 22 and 23 October 2015, from 10.00 to 16.00 on both days, the MULTIVAC Pro Selection Event will take place at MULTIVAC Resale & Service in Nettetal. All domestic and international customers who have a requirement for a second-hand machine are invited. Company tours will be offered, which will give an insight into the complete overhaul procedure for a MULTIVAC Pro Selection machine. Various MULTIVAC Pro Selection and exhibition machines can also be seen in the showroom. Food and refreshments will be provided.

MULTIVAC Pro Selection machines are OEM overhauled and stand for high quality and reliability. The machines are completely overhauled with genuine parts, and format sets are either overhauled or manufactured as new. This means that MULTIVAC Pro Selection machines comply with the current safety regulations and are delivered in an excellent condition.

MULTIVAC INVITES SCHOOL STUDENTS

Live experience of apprenticeships in the packaging industry: twice in May and July 2015 MULTIVAC opened its apprentice workshop in Wolfertschwenden to interested school students from the region, and it presented itself as a highly attractive company for apprentice training. As part of the organised events, the participants were able to gain information in various parts of the company about the wide range of apprenticeships on offer at MULTIVAC and about the detailed content of the training. Apprentices from different areas of the company were available to

answer questions from the school students. The program was rounded off with training on applying for apprenticeships and with the manufacture of a clock, which groups of participants were able to build from various parts. As one of the largest employers in the region, MULTIVAC offers young people qualified training places in technical and commercial professions as well as in IT. There are currently 130 young people being trained in twelve professions at the production sites of Wolfertschwenden (Allgäu), Lechaschau (Tyrol) and Enger (Eastern Westphalia).



MULTIVAC KOREA@SEOUL FOOD 2015

Exhibition presence: MULTIVAC Korea presented innovative packaging solutions for the food sector at Seoul Food 2015 in the middle of May. The exhibits included various thermoforming packaging machines, traysealers, chamber machines and chamber belt machines for a wide range of applications in the food sector. The new R 105 MultiFresh™ thermoforming packaging machine in particular attracted the attention of the exhibition visitors; the entry-level model for producing vacuum skin packs was shown for the first time in Korea.

MULTIVAC CHINA OPENS A NEW SALES OFFICE AND ORGANISES A "FAMILY DAY"

Sales network expanded: MULTIVAC has been represented in China since 2008 with its own subsidiary. Now a further sales office has been opened in Wuhan, allowing customers in Central China to receive even better service. MULTIVAC China currently employs approximately 40 staff. There are further offices in Shanghai,

Peking, Hong Kong and Taiwan.

In September 2015, MULTIVAC China in Shanghai is inviting, for the first time, all its staff and their families to an Open Day, where there will be games for the children, a buffet and information about all aspects of MULTIVAC.

MULTIVAC NETHERLANDS ORGANISES A CUSTOMER EVENT WITH PARTNER COMPANIES



Partners4food: In conjunction with its partner companies, Espera, ReflexSystems, Etiket Nederland and SRC, from the labelling and software sectors, MULTIVAC Netherlands is inviting customers to an event in Utrecht on 8 October covering all aspects of food packaging. The event will start with a midday meal and

include various lectures from market participants on the topics of "Developments in the packaging industry"; "Labelling regulations"; "Alternative forms of financing" and "Developments in the retail sector." Following the lectures, the participants will be invited to a networking session with snacks and drinks.

EDUCATIONAL INSTITUTIONS USE THE OPPORTUNITY OF A COMPANY VISIT

University and school students are very welcome: groups of visitors from various educational institutions are regular guests at MULTIVAC in Wolfertschwend. Since the beginning of the year, eleven groups have used the opportunity to visit the factory, including students from the universities of Kempten, Munich, Hanover and Berlin, as well as from the School of Media in Stuttgart, the Technical College for Meat Processing in Kulmbach, the Weihenstephaner Industry Forum, the Technical University of Kempten and the Technical College for Business IT in Memmingen. In addition to a company

presentation and a factory visit, there is a program that is always tailored to the specific interests of the participants - whether these are packaging trends, applications in food technology or practical sessions on packaging machines. Those taking part can not only learn about trends in the sector and packaging technology, but also get to know MULTIVAC as an attractive employer. Particularly pleasing: some visitors return to MULTIVAC as interns or student employees during their studies, or they come back as permanent employees after completing their studies.

HOLIDAY PROGRAM FOR EMPLOYEES' CHILDREN

Small explorers discover nature and technology: at the beginning of August, MULTIVAC organised for the fourth time a one-week holiday program in Wolfertschwenden for five-to-twelve year old children of employees. Where does the rainbow come from and how are colours formed? What does a mobile phone have in common with a dragonfly, or a mussel with a shopping center? How are houses and bridges built? Sixty children were able to experiment with various topics from nature and technology, as well as play and be creative. The program, which was conducted by the not-for-profit educational institution, Science-Lab e.V., is part of MULTIVAC's desire to support its staff in bridging some of the holiday period.



MULTIVAC ROMANIA SPONSORS PROJECT FOR SUSTAINABLE AGRICULTURE MODELS

Sponsorship: MULTIVAC Romania supports the project "Sustainable Agriculture Models In the Romanian Mountain Area" by providing six C 100 chamber machines. Objective of the project: Improved sustainability of livestock based agriculture in the Romanian Carpathian Mountains by means of integrating traditional activities in the modern economic system. The project that is supported by various partners started in January 2014 and will end in December 2016. The chamber machines can be used for the packaging of dairy products within the project.



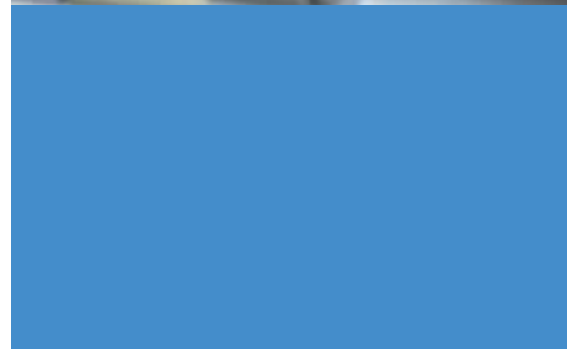
LABELLING OF PRODUCTS IS ESSENTIAL TODAY. IT DELIVERS PRODUCT INFORMATION, ASSUMES A MARKETING FUNCTION WITH ITS INDIVIDUAL DESIGN AND ENSURES AUTHENTICITY AND TRACEABILITY ARE MAINTAINED.

To mark FachPack, which this year has put the focus on “Labelling & Marking”, we spoke to Volker Gerloff, CEO of MULTIVAC Marking & Inspection, about the most important trends in the sector.

Mr Gerloff, which products are typically labelled with your labelling solutions?

Volker Gerloff: Our customers are mainly in the food industry. Our systems label meat and sausage products, as well as cheese, fish, confectionery and convenience products. These include the labelling of packs, which are not produced on MULTIVAC packaging machines, such as tubs, bottles or boxes for secondary packaging.

Our customers also include companies in the medical and pharmaceutical industries. We see high growth potential in this sector for technically sophisticated labelling, marking and inspection solutions.





“WE ARE INVESTING MASSIVELY IN THE DEVELOPMENT OF INNOVATIVE PRODUCTS.”

In your opinion, what has been the most important developments in recent years in the market for labelling and marking solutions?

Volker Gerloff: Two crucial developments in my opinion are firstly labelling without downtime within the packaging procedure, and secondly the application of detailed product information on the pack. Customers also demand a high level of flexibility in the labelling and marking of small batches. These trends are particularly evident in our core market of the food industry.

The packaging procedure can be optimised through labelling without downtime. The output volume is increased and costs are reduced at the same time. The packaging line does not have to be stopped during label roll changes or when a printer's consumable materials, such as ink ribbon or ink, are replaced.

How can labelling or marking without downtime be achieved?

Volker Gerloff: This is possible by means of redundant labelling solutions, i.e. we install several labellers or printers on a packaging machine, or we install a conveyor belt labeller with several label dispensers downstream from a

packaging machine. This means the consumable materials can be replaced on one label dispenser, while production continues on the other dispenser without interruption.

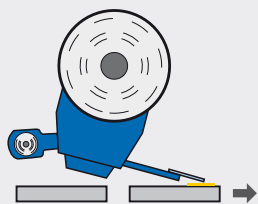
What requirements are there with regard to detailed product information?

Volker Gerloff: This is a question firstly of statutory requirements for consumer protection, and secondly of information about the product and manufacturer. Due to the Food Information Regulation, which has been in force since December 2014, the information content on labels and other types of marking has again increased significantly, e.g. with details about the country of origin of the food or about allergy information. Nutritional value labelling, which has been voluntary up to now, will become obligatory for food in the EU from December 2016. Packs will then have to be labelled with information about caloric value, fat, saturated fatty acids, carbohydrates, sugar, protein and salt.

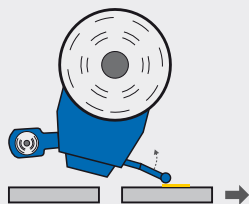
Another trend is the use of QR codes or data matrix codes, behind which a web address is concealed that can be scanned with a smartphone and delivers additional information about a product.

APPLICATORS FOR LABEL DISPENSERS

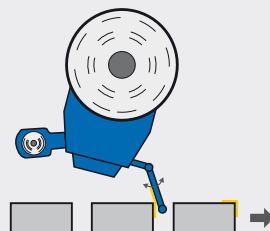
MULTIVAC label dispensers can be equipped with various applicators, allowing the widest range of product shapes and types to be labelled reliably and accurately. The applicators ensure labels are transferred precisely and pressed on securely.



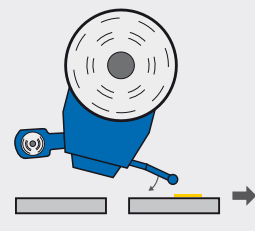
Fixed dispensing edge
The fixed dispensing edge even applies labels in slight depressions and presses them on securely using a brush.



Movable dispensing edge
The movable dispensing edge compensates for any slight height differences in the products and presses the label on securely with a press-on roller.



Angled dispensing edge
The angled dispensing edge applies labels to the leading side of products and presses them over the front edge onto the top face.



Mechanical dispensing edge
The mechanically actuated dispensing edge is suitable for products with large height differences.

What is MULTIVAC Marking & Inspection engaged in at the moment?

Volker Gerloff: We have developed solutions for the market requirements described above, and we are continuing to expand our product range. We are particularly busy at present with the issue of quality control during labelling, for example the data printed on a label or pack. We have various scanner solutions available, which extend from checking the presence of a label right through to checking clear text. This enables products, which are marked incorrectly or not at all, to be separated out or ejected. We are also working constantly on innovations so that we are prepared for future market developments.

What are the latest innovations from your company?

Volker Gerloff: Our latest developments include a new generation of label dispensers, which was launched onto the market in 2014. On the basis of this new generation of dispensers, our series of conveyor belt labellers has already been completely re-engineered. A particular feature of this is the L 300 BASELINE, which as an entry-level model has completed our portfolio in this sector.

Our new inline labellers have been available since the beginning of 2015, similarly, we have re-engineered these and equipped them with the new label dispensers.

What do you see as the greatest challenges for suppliers of labelling and marking solutions in the next five years?

Volker Gerloff: Large international customers already demand complete solutions. This trend will increase in

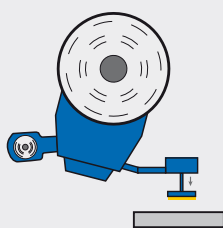
future. Labelling and marking technology, i.e. labelling machines and printing systems, as well as the associated inspection systems, will have to come from one source. Ideally the entire packaging line with integrated labelling and marking technology will be purchased from one manufacturer. This enables intelligent communication among all the machines to be achieved.

Other aspects are preventative machine maintenance and the delivery of wearing parts and consumable materials when required. We already know the solution from everyday office life, namely that not only is the remaining time or quantity of the printer's ink cassette displayed, but also that an automatic order to the supplier is triggered at the right time.

How is MULTIVAC Marking & Inspection reacting to this?

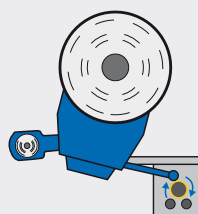
Volker Gerloff: We are trying to anticipate all these market requirements. We have expanded our development team and are investing massively in the development of innovative products.

We are planning to be able to present product innovations in future at every large packaging exhibition. As an integral part of the MULTIVAC Group, which offers complete line solutions, we see ourselves with a clear advantage over competitors, who as a single company only offer either labelling technology or inspection systems.



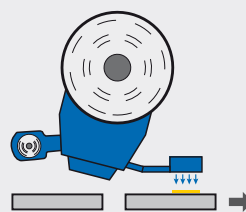
Pneumatic applicator

The pneumatic applicator ensures accurate labelling in intermittent systems.



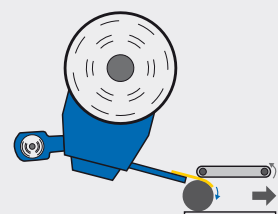
Wrap-around applicator

The wrap-around applicator places labels on cylindrical products in intermittent systems.



Blow-on applicator

The blow-on applicator blows the labels onto the product without contact in a longitudinal or lateral direction.



Roll-on belt

The roll-on belt rolls labels onto cylindrical products as they pass by.



THE NEW INLINE LABELLERS FROM MULTIVAC MARKING & INSPECTION HAVE BEEN ON THE MARKET SINCE THE BEGINNING OF 2015. WE SPOKE TO THOMAS DÖMER, WHO IS RESPONSIBLE FOR OEM SALES AT MULTIVAC MARKING & INSPECTION, ABOUT THE AREAS OF USE AND THE BENEFITS OF THE NEW LABELLING SYSTEMS.

Mr Dömer, MULTIVAC has completely re-engineered the labeller series. What are the most important innovations with this inline series?

Thomas Dömer: The inline labellers have been equipped with a new generation of label dispensers, which were launched onto the market in 2014 by MULTIVAC Marking & Inspection. This new generation of label dispensers works with the Modbus communication protocol, with which all the latest PLC machine controls can communicate. This is the primary importance in regard to the integration of our labellers in machine controls from other machine manufacturers. Thanks to state-of-the-art servo technology, namely a servo motor that is optimised for the labelling

**“WE EXCEL IN
PLUG & PLAY
SOLUTIONS.”**

process, it is possible to achieve particularly high speeds and maximum labelling accuracy. It is precisely in these areas of cycle output and positional accuracy the demands on labellers have increased sharply in recent years.

Due to an integrated control and drive technology, the label dispensers are particularly space-saving since no control cabinet is required. The separate control terminal can be located where required in the most ergonomic position.

At which markets and customers is the series of inline labellers aimed?

Thomas Dömer: We are addressing various sectors with the new inline labellers. They are used mainly in the food and confectionery industries, but there is also a need in the medical industry, as well as in the sector of paints and varnishes and for secondary packaging. Our customers include packaging machine manufacturers, among them producers of vertical and horizontal tubular bag machines, as well as suppliers of system technology.

What are the particular challenges with these target groups?

Thomas Dömer: The biggest challenge is matching our labellers to different circumstances on site, namely installing them on a wide range of packaging machines or conveyors. This means integrating our labelling solutions in the particular machine control is a very significant aspect.

How does MULTIVAC meet these challenges?

Thomas Dömer: We excel in plug & play solutions and can draw on more than 30 years of experience in the area of inline labellers. The customer receives a label dispenser, fully equipped with the holding device and appropriate add-on parts, i.e. MULTIVAC Marking & Inspection assumes responsibility for designing the integration of the labelling system into the overall process.

As with all our other product series, we have opted for a modular construction for our new inline labellers. This means we can ensure, our customers always get the optimum solution, both technically and cost-effectively. MULTIVAC inline labellers also offer a high degree of connectivity to a wide range of control environments.

In your opinion, what are the most important trends in the area of inline labellers?

Thomas Dömer: We are receiving an increase in the number of enquiries for labelling solutions in clean areas. For example, tubular bag machines are often located in high-risk areas and subjected to high-pressure cleaning. MULTIVAC offers label dispensers with the IP69K protection class for this area of use. There is also certification in accordance with USDA for the American market.

Another trend is the installation of two inline labellers on one packaging machine, allowing two different labels to be applied per pack. In addition to the main label with the manufacturing and content information, many product manufacturers also want to apply a promotional label for special offers, new products, free trials, best price etc.

What feedback have you received from the market?

Thomas Dömer: The labelling solutions we have delivered to date are running very smoothly and all the requirements have been met 100 percent.





TOOTHED CONVEYOR BELTS INSTEAD OF TRANSPORT BELTS

WHEN PRODUCTS ARE BEING LABELLED, VARIOUS TRANSPORT SOLUTIONS ARE USED DEPENDING ON THE PRODUCT AND ON THE LABEL PLACEMENT. MULTIVAC MARKING & INSPECTION HAS DEVELOPED AN ALTERNATIVE TO THE TRANSPORT BELT WITH ITS NEW TOOTHED CONVEYOR BELTS. THEY PREVENT FALSE TRIGGERING DUE TO LABEL RESIDUE AND MAKE OPERATION AND INSPECTION EASIER.

Conveyor belt labellers can be used in a very versatile way: they can apply labels to all sides of the pack - from above, from below, to the sides or over an edge. Even clip-on reclosure lids can be fixed in place with a label. The range of output and use of transport conveyor systems extends from simple standard applications, in which the product is still fed in manually in some cases, right up to complex high-speed applications in conjunction with inspection systems, which are used in automated packaging lines.

Transport solutions for different labelling tasks, products and sectors

Due to the diversity of applications, not every product can be transported to the label dispenser in the same way. Depending on the particular requirement, MULTIVAC Marking & Inspection offers a wide range of different transport solutions, which also include customer-specific solutions. "The type of transport device that is used depends on the product and on the label placement," explains Karsten Strothmann, Sales Director at MULTIVAC Marking & Inspection. "It also depends on how firmly the pack has to adhere to the conveyor surface during transport."

In the food area, many products are packaged in trays or thermoformed packs. These are generally transported on belts with different coatings, such as TPU or silicone. In the case of cylindrical products, such as large-diameter sausages transported horizontally, the method of choice is a driven roller conveyor. This system is also suitable for medical or pharmaceutical products, such as tablet tubes or insulin syringes. If, however, the content of the pack is liquid, a link chain conveyor could be of benefit for hygiene reasons. This can be cleaned much more easily and quickly, if for example, oil or sauce from the food gets onto the transport conveyor. Link chain conveyors are also used if the product has to be able to be turned easily, in order to align the label with a handle or seal tab.

In general, the transport device must ensure the packs are accessible to the label dispenser and any press-on unit from all the sides that are to be labelled. When folding cartons are being sealed, vertical toothed belts are used, between which the cartons are fixed in place in such a way that the tuck-in flaps can be reached.

Different requirements for the adhesion of the packs

The pack must not slip at the moment the label is applied to it. That is why grip belts, i.e. adhesive belts, are often found at this position. However, the products must, in many cases, be capable of being pushed on the transport conveyor at the infeed and discharge areas of the labeller. This is important for optimum pack flow, if the overflow speed of an upstream checkweigher in the line has to be braked, if packs have to be diverted onto a separate discharge conveyor, or if reject packs have to be ejected at right angles to the running direction. Non-adhesive queuing belts are used for this task. Depending on the requirement profile, several belt segments with different transport belts can be used along the line in order to meet the particular requirement at each position.

New challenges

Two market trends can be seen: firstly, the output capacity of packaging lines is constantly increasing, and the operation of these is now largely uninterrupted. Secondly, the labelling quality must be checked directly at the labeller.

The first requirement can be met with the existing transport solutions; it is however increasingly more difficult for operators during the largely uninterrupted operation of the packaging line to operate the labeller without labels getting onto the transport belts. During running operation the triggering light barrier can be activated in error, e.g. when changing the label roll, which means the next label falls unintentionally onto the belt. These labels do not only look unsightly, they can also trigger consequential faults. If the product light barrier interprets a label on the transport conveyor as a product, this results in the faulty dispensing of a label. In addition to this, the removal of label residue from belts is very time-consuming.

MULTIVAC Marking & Inspection fulfils the second requirement - free accessibility of the product for label checking - with several solutions. In the case of labelling on the underside of the pack, there are various options, e.g. a special inspection conveyor where the product runs on several round belts, or cut-outs to customer's design in the belts, which give a free view of the product to the camera.

Alternative to the belt

Both requirements present labelling systems with the same challenge when developing new transport solutions to manufacturers: the design of an alternative to the traditional transport belt for products.

MULTIVAC Marking & Inspection set itself this task and launched an additional transport solution onto the market in the middle of 2015: this does not transport the products on a belt in the usual way, but by means of toothed conveyor belts, mounted at the side and driven

dispensers are also easily accessible and not, as with traditional belts, covered by the belt frame. This means that the labelling system has less unplanned downtime, and cleaning time is also reduced since no label residue has to be removed any longer from a transport belt. The overall equipment efficiency increases, since there is significantly less false label triggering.

If the conveyor belt labeller is equipped with a 2-way dispensing edge for the label dispenser in addition to the toothed conveyor belts, then label and adhesive residue



by servo motors. The products are guided on the pack flange. "This solution is particularly suitable for flat thermoformed packs or trays, like those that are frequently used for sliced products. Up to 200 packs per minute can be labelled. The packs are freely accessible from above and below, and they can be checked without problems from all sides by a wide range of visual inspection units," explains Karsten Strothmann.

The new transport solution makes operation of the labelling system much easier since the bottom label

are finally part of history. This dispensing edge ensures that labels are not only dispensed, but they also remain on the backing strip and are wound up with this, if they are not to be applied, e.g. if they are identified as faulty. In the case of reference runs or a change of layout, where the previous labels are still in the label path, there is no requirement for the operators to remove the labels manually. The dispensing edge turns through 180 degrees into the winding position and simply feeds the unwanted labels away on the backing strip.

HIGH LEVEL OF OPERATING SECURITY AND RELIABLE WEIGHT CHECK

IMPROVED LINE INTEGRATION FOR CHECKWEIGHERS







MULTIVAC checkweighers now work even more closely with MULTIVAC packaging machines and labelling or marking systems: loading a new recipe via the HMI 2.0 control terminal automatically controls the settings for the checkweigher. The integration simplifies the operation, reduces the interaction between man and machine and increases the level of both automation and process reliability.

In terms of high overall equipment effectiveness and efficient product flow control, in-depth integration of the checkweigher in the line control is highly desirable. MULTIVAC is capable of meeting this requirement in full by integrating the checkweighers which are available in three weight ranges from 10 to 6,000 grams, in the HMI 2.0 user interface of its packaging machines. If a user selects the recipe for a new product batch at the packaging machine, he also immediately changes all the necessary settings on the checkweigher. Starting and stopping the checkweigher can also be done from the user interface of the packaging machine, which displays status messages for the checkweigher ("Ready", "Stopped" or "Producing").

Reject packs are automatically ejected.

With an optional metal detector

MULTIVAC checkweighers are designed as dual-range weighers, which enables them to achieve an unusually

wide range of officially calibrated weights. They can be equipped as an option with metal detectors. These are matched to the specific application in order to achieve the required sensitivity, and they can detect all types of metal.

When building the frame structures, MULTIVAC Marking & Inspection benefits from its many years of experience in the area of conveyor belt labellers. The transport conveyor and weighing modules are mounted on a robust twin-beam carrier, onto which almost all configurations of different conveyor modules can be fitted. The floor stands therefore offer particular advantages: they are designed for rigidity against flexing, resistance to torsion and for reduction of vibration. This ensures maximum weighing accuracy with the checkweighers.

Twin-track version for high output

Where multi-track packaging lines are being used, MULTIVAC Marking & Inspection has a twin-track version of the checkweigher in its portfolio. Both tracks are controlled by one control terminal, offering all the benefits of in-depth line integration. Simultaneous weight checking on both tracks ensures high output is achieved and this optimises the packaging procedure with both line converging and the discharge of the packs via a handling module.

DISPENSE OR DEFLECT LABELS PRECISELY AS REQUIRED

2-WAY DISPENSING EDGE



MULTIVAC Marking & Inspection has developed a 2-way dispensing edge for its labellers that can be rotated pneumatically through 180 degrees. It features a release edge and a deflection face that can be interchanged very quickly. This innovation ensures that labels that are not supposed to be dispensed onto a pack remain on the backing strip, on which they are then wound up. This function is particularly important when, for example, the print layout is changed or a label has been identified as faulty. Not only does this reduce costs, but it also makes the labelling process more simple and more reliable. The new 2-way dispensing edge can be installed both on MULTIVAC cross web labellers and on conveyor belt labellers from the L 310 series.

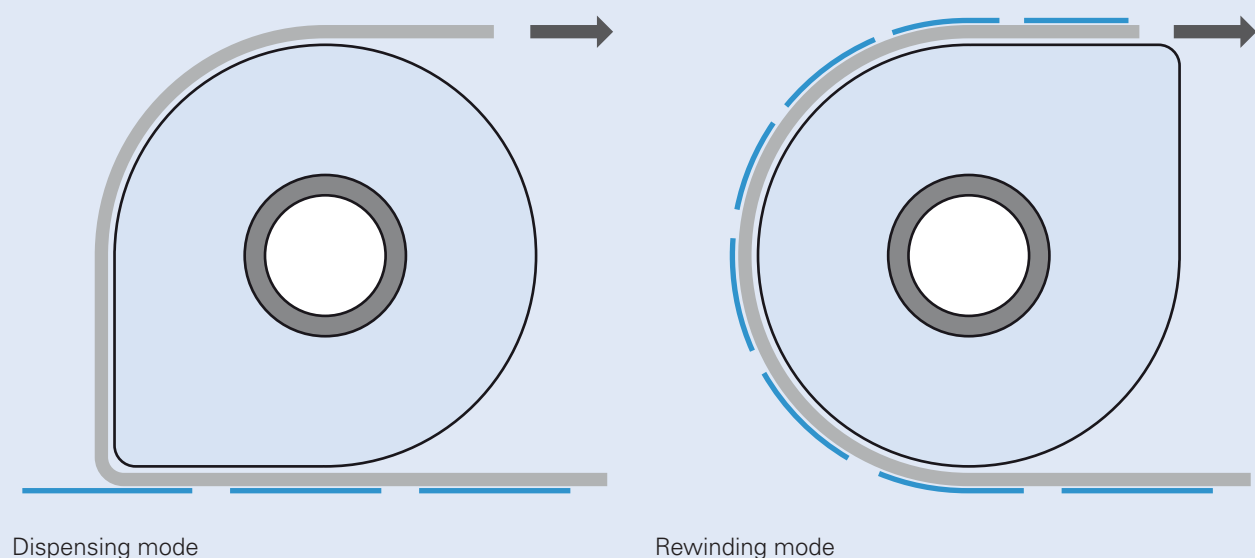
When setting up and operating a labeller, situations occur in which labels are not supposed to be dispensed. This is the case, for example, when the length of the label is being determined by means of a measurement run, when labels are being changed, or when there are labels with the print data for a preceding batch still in the label path. Standard dispensing edges continue dispensing labels during operation and the labels need to be collected by hand to prevent them from falling down or getting stuck on the packaging machine, the transport conveyor or on the hall floor.

The new 2-way dispensing edge from MULTIVAC Marking & Inspection provides two options: if a pack needs to be labelled, the release edge is used. However, if individual labels are to remain adhered to the backing strip, which is wound up after the labelling process, then the deflection face is activated. The number of labels, which are not supposed to be dispensed, can be entered manually at the MULTIVAC HMI 2.0 or determined automatically by the machine control.

Automated, user-friendly and reliable

The 2-way dispensing edge makes label measurement runs quick and convenient: the labels, which are advanced when the label length is being measured, are simply wound up with the backing strip. Changing the print layout is also more efficient and more reliable as information that was intended for a preceding batch is prevented from being applied to the next production batches. If faulty labels are identified when inspecting the print results, they remain on the backing strip. The 2-way dispensing edge is then automatically rotated through 180 degrees allowing the faulty labels to be wound up as well. The next correctly printed label is then applied to the pack.

2-WAY DISPENSING EDGE

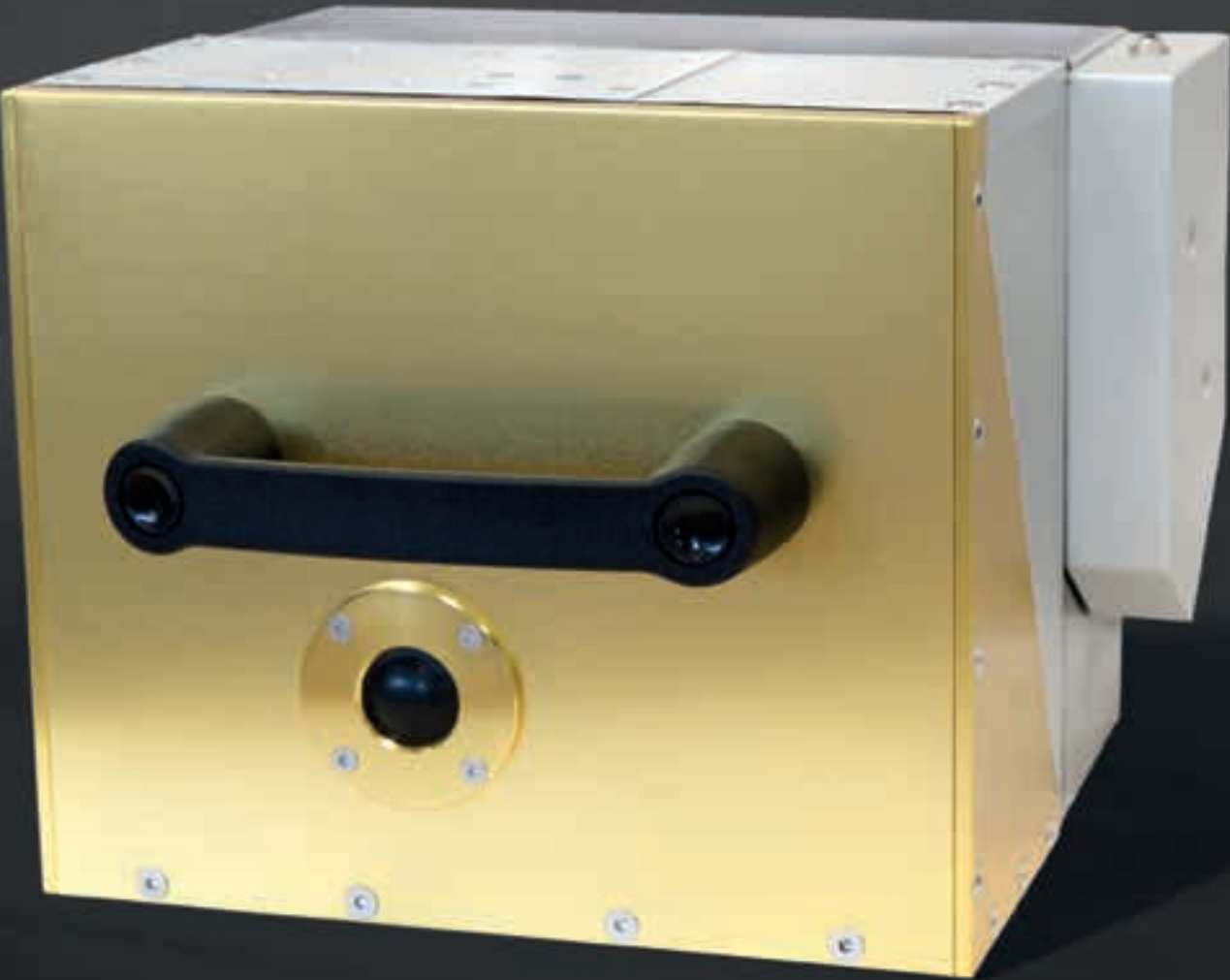




WET CLEANING THANKS TO IP65 PROTECTION CLASS

TTO 11 THERMAL TRANSFER PRINTER





MULTIVAC Marking & Inspection has expanded its portfolio of thermal transfer printers with the TTO 11. This unit, which has a print width of 53 millimetres, meets the requirements of the IP65 protection class while operating either intermittently or continuously.

Thanks to its IP65 protection rating, the TTO 11, which is a further development of the TTO 10, is particularly suited to applications in production environments where wet cleaning is regularly performed. As with the TTO 10, the controls are integrated in the HMI 2.0 user interface, which means no separate printer control terminal is required. This not only simplifies installation and operation, but also improves the hygiene properties of the printing solution so this printer is particularly suitable for use in the marking of food products. The IP65 protection rating of the TTO 11 systematically continues this hygiene concept: since the printer can remain in the production line during cleaning and does not even need to be covered, the time and effort for the washdown process are reduced significantly.

The TTO 11 is capable of integration in all packaging and marking systems equipped with a MULTIVAC HMI 2.0 user interface. It is suitable for the printing of film on thermoforming packaging machines and tray-sealers as well as for the printing of labels on labelling systems. The TTO 11 can print the different materials with

either fixed information such as text, graphics or logos, or with variable data such as date, batch number, barcodes or 2D codes. The high resolution of 300 dpi ensures good legibility even with small text.

Effective, efficient and hygienic

The mounting frame for the TTO printers gives the units optimum accessibility for service work, such as replacing the thermal printhead, and for inserting the ink ribbon. Easy access also simplifies the necessary cleaning work.

In order to minimise the operating costs as well as reducing the service work, the distance between two labels or print impressions is only 0.5 millimetre, and a 1,000 meter long ink ribbon ensures that downtime is kept to a minimum. A clutch-free ribbon drive also reduces the risk of ribbon breakage, and activating various ribbon-saving functions enables the user to increase the duration time of the thermal transfer ribbon.

To complement the printing technology, MULTIVAC also offers appropriate consumable materials of the highest quality, such as thermal printheads and ink ribbons. Five different materials with various wax and resin proportions are available. Expert advice, which also includes printing tests, and the matching of all the materials involved in the printing process ensure that optimum results are achieved.

TRIED AND TESTED IN THE MARKET

R 085: ENTRY-LEVEL MODEL FOR A WIDE RANGE OF APPLICATIONS



The R 085 thermoforming packaging machine, which was presented for the first time at inter-pack 2014, has since established itself very well in the market. It is ideally suited to a wide variety of food manufacturers who want to embark on automatic thermoforming packaging. With its outstanding price-performance ratio - the R 085 is currently the lowest-cost thermoforming packaging machine in the MULTIVAC portfolio - it scores particularly well with small and medium-sized companies. The areas of application extends from packing fresh meat or sausage products in small meat processing businesses to prepared food or complete ready meals in catering operations.

The R 085 is available with four standard format layouts. It can be used for running both flexible films and rigid films. The machine is able to produce modified atmosphere packs, as well as vacuum packs, allowing users to also meet the requirement for extended shelf life

for their packaged products. With a pack depth of up to 80 millimetres, the R 085 offers a whole range of possibilities for pack design. Electric drives are used for both the lifting units and the transport chain which means the machine also fulfils the requirements for improved energy efficiency.

The R 085 is equipped with the IPC 06 machine control, as well as the HMI 2.0 user interface with a 12.1" touchscreen. The HMI is integrated in the control cabinet and ensures that the machine can be operated very easily. The R 085 also has a quick-change system for forming and sealing dies with proven slide-in technology, which is integrated as standard in the die design. This makes it easier to convert the machine to other formats.

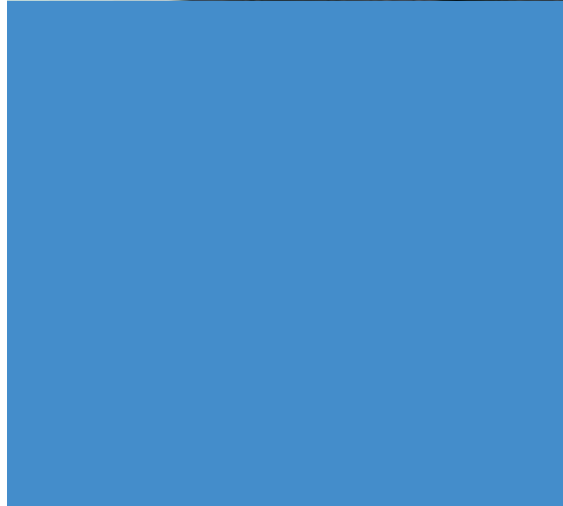
The R 085 meets the proven quality standards from MULTIVAC. It is designed in the MULTIVAC Hygienic Design™, which enables the machine to be cleaned easily from the inside and outside.

INDUSTRY 4.0: WHAT ARE THE BIGGEST CHALLENGES AND WITH WHICH SOLUTIONS DOES MULTIVAC SUPPORT ITS CUSTOMERS? WE SPOKE ABOUT THIS WITH GUIDO SPIX, MANAGING DIRECTOR AND CTO OF MULTIVAC.

Mr Spix, Industry 4.0 is a topic that has been discussed in great detail recently. How do you assess the significance of Industry 4.0 for your customers?

Guido Spix: First, we must somewhat narrow down the very wide topic of Industry 4.0 for our customers, since many different things are understood within this term. In its most abstract sense, it is about the merging of established information technology with innovative production systems to create new products.

For us in practice, it is initially about implementing the Industry 4.0 solutions, which MULTIVAC has already developed, for the benefit of our customers and the





“MANY OF OUR CUSTOMERS ARE NOT AWARE OF THE OPPORTUNITIES INDUSTRY 4.0 OFFERS COMPANIES OF EVERY SIZE AND IN EVERY SECTOR.”

VAC R245

end-user. One example of this is “Track & Trace” traceability in the production process of the food industry, also known as “Farm to Fork”. It is here that MULTIVAC packaging machines can adopt product data from farmers and upstream processing operations, and then assign this data reliably to the individual packs. The consumer then finds this data on a printed label. Further details are available to the consumer via a QR code, which is linked on the Internet to the individual pack with the saved product data.

There are many technical challenges in implementing these solutions - particularly in the area of marking technology. High printing speeds are required and large quantities of data have to be processed. As a leader in innovation, MULTIVAC faces these challenges and has already supplied several such systems to customers.

Consumers appreciate this type of traceability because they benefit from quality and product safety.

Are there companies in certain sectors that have implemented this measure earlier than others?

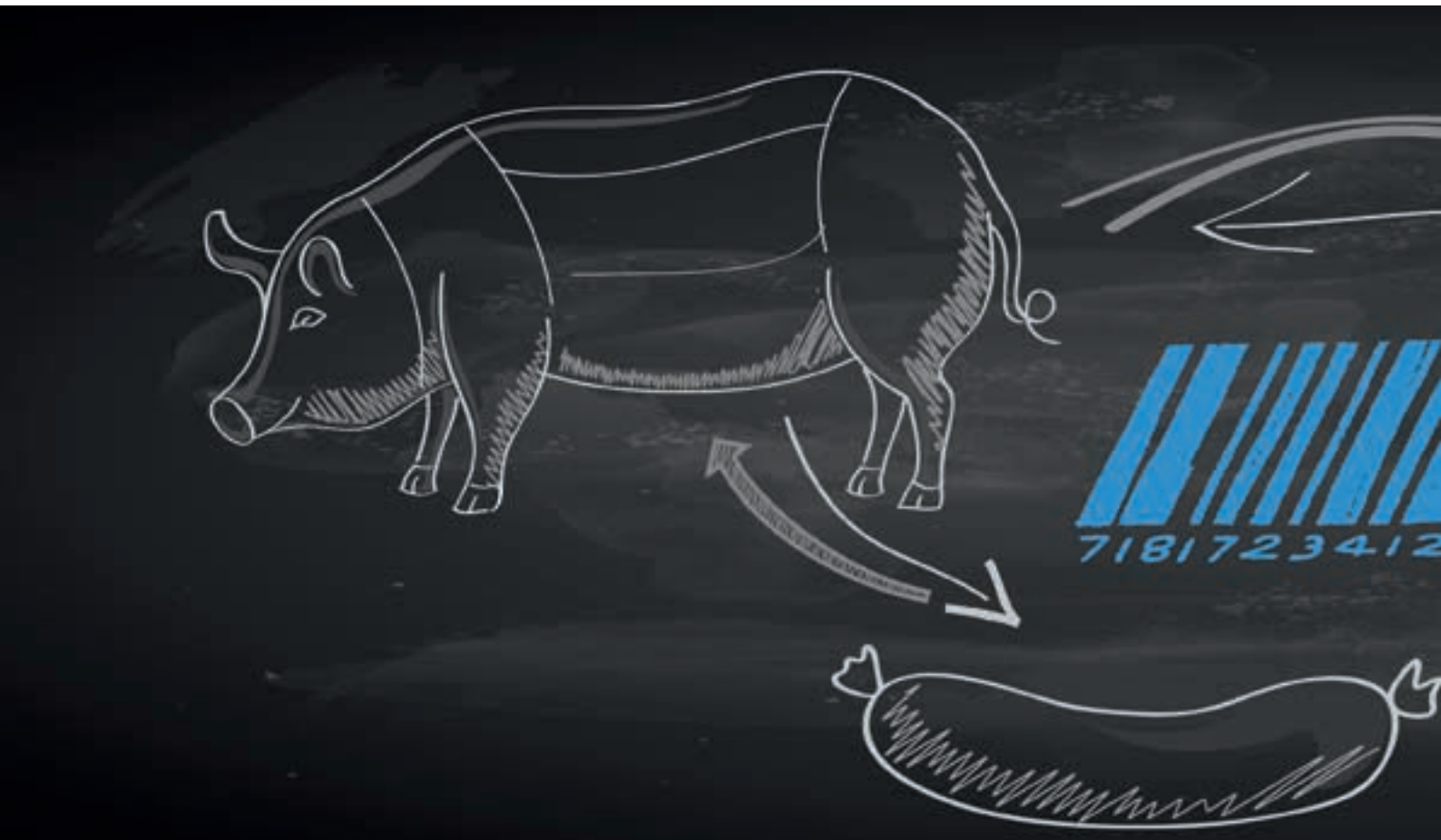
Guido Spix: Regarding the subject of traceability, it is

the medical and pharmaceutical industries that have been requesting this from us for several years. Packs in these industries must be individualised to comply with legal requirements. This enables the end-user to clearly establish that the product originates from the genuine manufacturer. A lot of information is available from the manufacturing and distribution processes for each pack.

What are the challenges for MULTIVAC in connection with Industry 4.0?

Guido Spix: The challenges are the same across all sectors. A return on investment can not simply be calculated in months. One can only achieve the full benefit when the availability of resources and data is guaranteed throughout the entire added-value chain, from raw materials to the end-user. This requires a change of thinking by many of those involved.

Topics such as “Big data handling” and data security are still partly open. It is for this reason MULTIVAC prefers to ease into Industry 4.0 with solutions that can be managed technically and commercially.



Which Industry 4.0 solutions does MULTIVAC have available?

Guido Spix: We seized on the topic of Industry 4.0 at an early stage and now offer scalable solutions, which make packaging procedures even more efficient and at the same time highly flexible. With MULTIVAC Line Control (MLC) we offer a higher-level control unit, capable of coordination all the components of a packaging line. It ensures that processes are time-optimised, precise, reproducible and transparent, and it is also very easy to operate.

Many of our customers are not aware of the opportunities offered by Industry 4.0 to companies of every size and in every sector. We are proactively seeking discussions with them - and will then observe how interest grows.

What benefits does MULTIVAC Line Control offer your customers?

Guido Spix: MLC can control entire packaging lines in real time and communicate information about the status, process values and location of the products and packs to higher-level systems at any point in time - and packaging

lines can, in turn, obtain data from higher-level systems. Evaluation of this data allows companies, for example, to optimise their material use, coordinate their material procurement on the basis of current data, and carry out maintenance measures in good time with no, or minimal, impact on running production.

In the interests of interconnecting all processes, which is the central component of Industry 4.0 strategies, MLC can also be linked to manufacturing execution systems (MES) for controlling production, to enterprise resource planning (ERP) programs, as well as to systems for machine data and production data acquisition.

In your opinion, how far has the digitalisation of industrial processes already advanced in manufacturing industry in general?

Guido Spix: We know from the automobile industry that Industry 4.0 ideas have already progressed further in their implementation. Close cooperation between suppliers of information and production technology and their customers is the basis for success.

I still see a lot of potential in the food industry.





**NATURAL, CRUNCHY
AND ALWAYS FRESH**

R 145 THERMOFORMING PACKAGING MACHINE PRODUCES HIGH-QUALITY PACKS FOR FINE NUT MIXTURES

More than five decades ago, International Mill opened its first point of sale in Al-Mubarakiya, the traditional business quarter of Kuwait City. One can still buy roasted coffee beans and nuts there from this same producer, which is still based in the city. However, the business in the traditional market is not the only constant in the company's history: there is the same claim to the high quality of its products as there was in the early years, and this now also extends to the spices, dried fruits and confectionery, with which International Mill has gradually expanded its range: "The processing of first-class raw materials is our guarantee, that over the years we can compete for our customers' favour and even expand our business," says Shareef Sadeq the company's General Manager.

Today a further 13 businesses in the metropolis on the Persian Gulf offer products from International Mill: they can be found in regional supermarkets and traditional souks, as well as in Kuwait's modern shopping malls. The company has also opened another sales channel through catering suppliers who can order portion packs that are handed out, for example, to flight passengers.

In order to present the high-quality snacks in a suitable way, the company management decided last year to completely redesign the packs for its nut specialities. "In addition to a visual redesign of the packs, it was also a question of optimising their quality and automating the packaging procedure," says Shareef Sadeq.

Affirmation of quality

Although the nuts, fruits, spices and confectionery had, up to that point, been packed by hand. The potential for increased efficiency was in fact a less critical factor in the purchase of the thermoforming packaging machine. The main motive for the project was much more about improving the visual appearance and quality of the packs. "Attractive presentation and pack reliability are critical factors for a business, when it comes to successful cooperation with large food companies, shopping malls or airline catering suppliers," says Shareef Sadeq with first-hand knowledge. "It was clear to us we could only meet the requirement for a consistently high standard over the long term by having an automated packaging procedure."

The search for a partner for the new nut mix packaging in a suitable consumer pack and portion pack soon took shape, as Shareef Sadeq emphasizes: "MULTIVAC is known in the Arab world as a trustworthy, reliable and service-orientated supplier of packaging solutions. It is for this reason, that we relied from the start on the expertise of this company - and we were not disappointed, since the company's good reputation was confirmed. The packaging solution was implemented on time, worked faultlessly from the first day and has exceeded all our expectations."

Packs that stimulate the appetite

Since April 2015, International Mill has been packing fifteen different nut mixtures in two sizes on the R 145 thermoforming packaging machine: usual consumer pack quantities and reclosable single portions. Among other factors, this machine that is designed for small to medium-sized batches was the model of choice due to its compact construction, since there was limited space in the production area for the new packaging solution, in



- ① The compact line layout leaves room for expansion
- ② The multi-head weigher is positioned over the loading area of the R 145
- ③ A cross web labeller applies labels to the underside of the packs

which a weigher and printer also had to be integrated.

In the case of the weigher, this involved a multi-head weigher, controlling the portion amounts of the individual ingredients when the nut mixtures are being filled into the packs. A direct web printer prints production and use-by dates, as well as batch numbers onto the upper web.

The customer's wish to have the pack cavity and lid exactly matched to each other in terms of colour provided a major challenge. "In the case of some of the 15 layouts for the different nut mixtures, the colour shades on the lower web were reproduced differently from those on the upper web. Working in cooperation with a leading film supplier, we experimented with various materials before the desired result was achieved," says Philip K. Koshy, Area Sales Manager at MULTIVAC, who managed the project at International Mill.

Follow-up order as affirmation of satisfaction

Despite these hurdles, International Mill was able to put the packaging solution into service on time. Shareef Sadeq is not only satisfied with the visual appearance of the new packs: "Our new packaging solution ensures the packs are tightly sealed. Since the product is now packed in modified atmosphere, we achieve a minimum shelf life of one year," says the General Manager with praise. This means the company can produce in advance and supply its customers with sufficient quantities, even when the demand rises rapidly at short notice. The company's satisfaction is affirmed by the follow-up order, which International Mill has already placed with MULTIVAC: immediately after its new packaging line was put into service, the company ordered a second R 145 for producing large packs.

R 145 THERMOFORMING PACKAGING MACHINE

The R 145 is a compact thermoforming packaging machine for small to medium-sized batches. Since it can be equipped with a wide range of dies and can be extended in a modular way, it is capable of being used very flexibly. The R 145 is controlled via the HMI 2.0 user interface. Thanks to its graphic depiction and recipe memory with 200 spaces, the machine can be operated intuitively, which significantly reduces the required training for the personnel.

Since the lifting units of the R 145 distribute the

sealing die pressure very evenly, and the servo drive of the transport chain positions the packaging materials very precisely, the R 145 produces packs with reproducible quality. The packaged food remains fresh for a long time and is protected against external influences.

The machine is built to the MULTIVAC Hygienic Design™ and is therefore very easy to clean. The side panels of the machine can be removed, allowing the areas inside the machine can be thoroughly cleaned.

R 145 THERMOFORMING PACKAGING MACHINE

Cut-off length (mm)	< 500
Forming depth (mm)	< 130
Output (cycles/min)	< 14*
Hygiene standard	MULTIVAC Hygiene Design™

*Depending on the equipment





UNIBEL AD is a daughter company of Bulgaria's largest food manufacturer, Bella Bulgaria, which is represented by at least one product in over 90 percent of Bulgarian food shops. The product range of the company, which was founded in 1992, includes sausage products such as scalded sausage, salami and ham, as well as a variety of pastry products and an extensive range of frozen pies in small and large sizes.

FRESH PRODUCT INSTEAD OF FROZEN FOOD

BY PURCHASING THE R 145 THERMOFORMING PACKAGING MACHINE, THE BULGARIAN FILO PASTRY MANUFACTURER, UNIBEL, HAS BEEN ABLE TO MAKE THE CHANGE FROM FROZEN TO FRESH PRODUCT. THE NEW PACKS KEEP THE PASTRY FRESH FOR SO LONG THAT SUDDEN PEAKS IN DEMAND CAN BE ABSORBED. IT HAS ALSO BEEN POSSIBLE TO OPEN UP NEW SALES MARKETS ABROAD.

New packaging machine eliminates bottleneck

The filo pastry and wide variety of associated products, available under the Bella brand name, are among the most successful of the approximately 200 products in the range. "Because Banitsas, which are pastry parcels filled with cheese, are one of the Bulgarians' favorite foods, there is probably not a single household in Bulgaria where pastry of our Bella or Familia brands has never been prepared," says Tsvetelina Tomina, Marketing Manager for the Bella Bulgaria brand in Bulgaria and Romania.

The popularity of the product presented the manufacturer with challenges when the seasonal demand suddenly increased. "Our production capacity was too small to cover the demand, which would rise dramatically at short notice before public holidays. Since the pastry only had a short shelf life, we were also not able to produce it in advance for the times of high demand," says Tsvetelina Tomina describing the difficulties. The limited shelf life of the raw pastry also forced the manufacturer to supply the product as frozen. This made transport more expensive and was not very popular with consumers; they preferred

fresh product and had therefore in recent years reached for the frozen Bella product with much less frequency.

“The investment in the R 145 thermoforming packaging machine was able to solve our problems with production and storage capacity at a stroke,” says Tsvetelina Tomina. It enables the product to be packed in a modified atmosphere, thereby extending its shelf life. This means that UNIBEL is no longer reliant on energy-intensive freezer storage.

A shelf life that is five times longer

It is vital for extending shelf life that the modified atmosphere is retained in the pack. A precondition for this is the high quality of the seal seams. The lifting units of the R 145 distribute the pressure in the sealing die very evenly, allowing the packs to be produced with a high level of reproducible seal quality. The filo pastry now remains fresh in the new pack for five whole months instead of four weeks - and without freezing.

“We had to experiment slightly with the gas flushing parameters before we were able to achieve this high packaging quality. MULTIVAC supported us very professionally in finding the optimum configuration for our product,” says Tsvetelina Tomina. MULTIVAC had already proved its expertise in giving advice on several

occasions before at Bella Bulgaria, since solutions for packing sausage and meat products had already been installed for some time at other daughter companies. “This outstanding cooperation was proven again in our project, as well,” says Tsvetelina Tomina with praise. “The packaging specialists quickly recognized what was important to us and very soon developed a suitable solution for us.”

Increasing demand for ready-to-cook pastry

Customers now find the pastry sheets at the fresh food counter instead of in the freezer cabinet and they can now use these immediately after purchase to make the much-loved Banitsas, spicy pies or sweet cakes, such as Baklava and strudel. The switch from frozen to fresh product is undoubtedly one of the reasons sales of filo pastry have risen rapidly. However, Tsvetelina Tomina also ascribes the customer interest to the modernised pack design: “Since the new thermoformed pack offers less space for product presentation and the front of the pack is smaller than before, this challenged our creativity. The new design has obviously been met with the full approval of consumers.”

Thanks to its great success in the market, UNIBEL has expanded its number of machines in the meantime,

R 145 THERMOFORMING PACKAGING MACHINE

Cut-off length (mm)	< 500
Forming depth (mm)	< 130
Output (cycles/min)	< 14*
Hygiene standard	MULTIVAC Hygiene Design™

*Depending on the equipment





and since the end of 2014 it has been operating a total of three R 145 thermoforming packaging machines. The compact machine is designed for small to medium-sized batches, and is suitable for modular extension and a wide range of dies. When packing the 500 gram portions, the company benefits in everyday operation from the ergonomics of the modern packaging machine, which can be operated intuitively via a 12" touch-display on the graphic HMI 2.0 user interface. The MULTIVAC Hygienic Design™ also makes cleaning easy: the stainless steel machines are capable of being washed down, while removable side panels and generous cleaning clearances make it easy to thoroughly clean all areas of the machine.

Modern packaging opens up new markets

Thanks to the MULTIVAC machines, the manufacturer can now regard the regular peaks in demand with a relaxed attitude: the long shelf life of the pastry in the thermoformed packs enables UNIBEL to increase production

in time before the periods of high demand, and then to store the packed pastry portions until they are called off. This means the company can cover the requirements of the supermarkets for fresh, high-quality pastry, even when the seasonal demand increases by three or four times, as is the case for example before Christmas.

In addition to this, it has also been possible with the switchover to the R 145 to market the filo pastry abroad - and this has also led to a rise in sales. Thanks to the extended shelf life, the high-quality products can now survive transportation over long distances without compromising quality. "In the last two years, consumers in Central and Western Europe have also discovered a taste for Bulgarian filo pastry specialties," observes Tsvetelina Tomina. "We can now fully meet this demand. The greater flexibility and reach, which the new pack has given us, have developed within a very short period of time into a decisive competitive advantage in the international market."



FLEXIBILITY IS THE TRUMP CARD

THE SWISS BELL GROUP EMPLOYS VARIOUS PACKAGING TECHNOLOGIES TO CATER FLEXIBLY FOR THE WISHES OF ITS MARKET PARTNERS. IN 2014 THE COMPANY PURCHASED A FURTHER TRAYSEALER FROM MULTIVAC.

With its five product brands of Bell, Abraham, ZIMBO, M^ossieur Polette and Hoppe, the Bell Group has a broadly based portfolio of brands. Bell also produces branded and own label products for various suppliers. This enables the Group to cover the diverse requirements of its customers, who include the retail and wholesale sectors, as well as the catering and food industries.

Bell Schweiz AG concentrates its poultry production for the Swiss market at its Zell location in the canton of Lucerne. In 2014, the company purchased an automatic MULTIVAC T 300 tray-sealer for this production site after this model had already proved itself at other locations. The new T 300 is used in the Convenience Food division for packing the smaller batches of various frozen products such as nuggets, chicken schnitzel and kebabs. The products are packed in large trays (300 x 202 mm). The majority of the packs are only sealed, but some of the products are also packed under modified atmosphere (MAP).

Traysealer technology is a valuable alternative for poultry production in Zell. The T 300 can be used flexibly for various packaging tasks at this location. "Here in Zell, we mainly pack our poultry products on large MULTIVAC thermoforming packaging lines. However, we always use the T 300 if a customer requires a smaller batch of large packs and prefers trays," explains Peter Ruepp of Bell. Thanks to its ability to respond flexibly to special requirements, Bell Schweiz AG can offer its customer added value in this way.

Different packaging procedures, one technology partner

When it came time to invest in the new traysealer, the Bell subsidiary in Zell put its trust in its many years of experience with MULTIVAC. "Our sales partner at MULTIVAC knows our company. It makes a big difference when the sales adviser is familiar with the circumstances on site, and immediately understands what we need," says Thomas Graf, Operations Manager at Bell in Zell.

Although the packaging procedures used by Bell - thermoforming packaging and packing in trays - are very different from each other, there are synergies when different packaging technologies from the same manufacturer are used. One of these is the design standards and machine quality for both technologies needing to be equally high. Another is the requirement of a similar user interface, allowing the change from one machine type to be much easier for the production staff. This means training periods can be reduced and, most importantly, fewer operating errors are made.

"Training was very straightforward for our staff. The construction of the machine is very simple and the operating method easy to understand, since it follows MULTIVAC's proven operating concept," says Peter Ruepp. As with the MULTIVAC thermoforming packaging machines, the traysealer is equipped with the intuitive HMI 2.0 user interface. The product settings, stored in the recipe memory and can be called up quickly for each of the products to be packed, are very practical for daily operation.

In the poultry production area at Zell, the trays are filled manually with frozen poultry products by two staff and the trays are then weighed and placed on the conveyor. After the trays have been sealed, they are removed from the discharge conveyor and labels with the product details are then applied by hand to the packs.

Due to the swivel castors, the T 300 can be moved within the production environment, and it can be quickly linked to an X-ray inspection system or another module. An X-ray inspection system enables possible foreign bodies in the packs to be detected - a function that is essential in meat and poultry production, so that bone splinters,



T 300 TRAYSEALER

Max. tray depth (mm)	< 125
Cycle output (cycles/min)	< 6*
Hygiene standard	MULTIVAC Hygienic Design™

*Depending on the equipment

for example, do not get into the retail chain.

After production, the machine is washed in the cleaning mode and it is then completely cleaned and prepared for the next production by the Cleaning team. The high-quality and durable stainless steel construction of the T 300 in the MULTIVAC Hygienic Design™ makes quick and hygienic cleaning very easy. The machine is therefore capable of being washed down completely. All hygiene-critical parts and areas are easily accessible.

The T 300 traysealer model has proven itself within the Bell Group

Zell is not the only Bell production site where a T 300 is used. The Swiss company, which is among the leading

meat processors in Europe, has already had good experiences with the traysealer model at several sites. "For reasons of standardisation, we work with the same equipment at as many locations as possible. We currently use a total of four T 300 traysealers at various subsidiaries, and always in those cases, where we want to have greater flexibility in our production capacity as regards to batch size and type of product," explains Thomas Graf.

The T 300 at the Zell poultry site does not currently have to be converted since all the products are packed in a single tray format. However, if in the future, various pack formats and different materials need to be used, a software-supported format change can be made on the T 300. This enables the machine to be converted in just a few simple steps.







**CHEESE REBELS RELY
ON A MULTIVAC
PACKAGING SOLUTION**

THERMOFORMING PACKAGING
MACHINE PACKS 30 DIFFERENT TYPES
OF HAY-MILK CHEESE - AS WHOLE AND
HALF BLOCKS OR AS QUARTERS AND
EIGHTHS

The company Käsebellen, which is located in Steingaden in the district of Weilheim-Schongau, looks back on a tradition of more than 150 years. Today, just as then, its top priority is to

“OUR MACHINE RUNS AS WELL AS IT DID ON THE FIRST DAY,” SAYS TINO WINTERHALTER, OPERATIONS MANAGER AT KÄSEREBELLEN.

manufacture products of the highest possible quality. Its recipe for success: no silage is used for feeding the cows, just fresh grass or hay - and all guaranteed GM-free. The cheese is produced in a tried and tested traditional method from 100 percent hay-milk that is fresh every day. Today the product range of Käsebellen comprises more than 30 cheese specialities - from the rustic “Bergerebell”,





the mild “Rotweinrebell” and the light “Fitnessrebell” to the “Feuerrebell” with its sharp chilli taste and the “Heublumenrebell” with its aromatic hay flower mixture.

Day in, day out, 1,400 cheese blocks

The cheese blocks are produced in Sulzberg in the Austrian region of Vorarlberg. More than 300 farmers, of which 100 are bio-milk producers, supply 30 million litres per year of pure hay-milk to the dairy. From this 1,400 cheese blocks are produced every day. Once produced, these blocks are transported to Steingaden for maturing and further processing, as well as final packing. The semi-hard cheese must mature for a number of weeks, and the hard cheese for some months, in the huge maturation rooms before the cheese blocks can be packed. However old the formulations may be, the technical equipment of Käserebellen is the most modern. The company does not just attach great importance to high standards in its production processes, it has also invested in state-of-the-art transport and storage technology. In 2008, the company acquired its own storage premises for cheese maturation in Steingaden with a capacity of 120,000 blocks of semi-hard and hard cheese.

Securely packed with MULTIVAC

When the maturing process is completed, the cheese is packed to extend shelf life and for onward transport to customers. Since 2009, Käserebellen has used a MULTIVAC R 245 thermoforming packaging machine to pack its cheese. Base web film is drawn into the machine, then heated and formed in a die to create pack cavities. Then the staff load the cheese blocks, which weigh up to six kilograms. An upper web is subsequently guided over the product and sealed. During this process the air is removed from the pack. This type of vacuuming is used for those sorts of cheeses (e.g. “Rotweinrebell”), which are not sensitive to pressure. In the case of products with

special hay flower or pepper varieties, which would be crushed by the vacuum, the air is replaced in the packs with a special modified atmosphere prior to sealing. The packed cheese blocks or pieces are then labelled by hand.

When developing and manufacturing its packaging solutions, MULTIVAC pursues the aim that is critical to its customers: ensuring a fault-free and smooth packaging procedure. That is why we offer a reliable machine design, which is tailored to the individual requirements of customers, and maximum hygiene, as well as simple operation, capture and processing of production data, and the rapid availability of spare parts and service.

Käserebellen uses these benefits to the fullest, and it was for this reason the company decided on MULTIVAC when it acquired its packaging machine several years ago. The packaging specialists first analysed the existing packaging concept and then highlighted potential for improvement. A pack and a suitable system concept was then developed in conjunction with Käserebellen. After the machine had been delivered, MULTIVAC’s Technical Service ensured that it was put into service without a hitch and that the new packaging solution was integrated in the cheese manufacturer’s production process. In addition to the robustness of the packaging, other important requirements had to be met. One of these requirements is the puncture resistance of the packs, allowing for products with small pepper corns to be packed securely. The R 245 thermoforming packaging machine is suitable for producing modified atmosphere (MAP) packs as well as vacuum packs, which means that the cheese producer can pack a wide range of cheese varieties efficiently on the same machine.

Ten tons of cheese are packed daily

The cheese blocks, weighing six kilograms, are today packed in eight to ten batches per day. This equates to around ten tons per shift - there is only the day shift. Thirty different cheese varieties are packed, mostly as whole



R 245 THERMOFORMING PACKAGING MACHINE

Cut-off length (mm)	< 700
Forming depth (mm)	< 150
Output (cycles/min)	< 14*
Hygiene standard	MULTIVAC Hygiene Design™

*Depending on the equipment

blocks but also as halves, quarters or eighths, depending on the order situation. Thanks to the MULTIVAC Hygienic Design™, the MULTIVAC R 245 is specially designed for the hygiene requirements of the food industry. Its stainless steel construction with its smooth, angled external surfaces without recesses, corners or edges enables it to be cleaned quickly and reliably - from inside and outside. Thanks to removable side panels, the interior of the machine is easily accessible for cleaning.

Thermoforming packaging machine wins everybody over

“Our packaging machine runs as well as it did on the first day,” says Operations Manager Tino Winterhalter, praising the durability of the R 245. “The quality and reliability in daily operation have really won us over.” Last but not least, he also appreciates their geographical proximity to MULTIVAC. MULTIVAC’s Technical Service has always demonstrated its expertise and good solutions are invariably provided within a few days, if there are any technical challenges. When the production hall in Steingaden was converted, the R 245 was turned through 90 degrees at short notice. The rapid implementation by the MULTIVAC experts ensured that everything went so smoothly, that production at Käsebellen was hardly affected. MULTIVAC maintains a worldwide service network, which covers the entire life cycle of a packaging solution. Rapid technical help at every location in the world ensures maximum availability of all installed machines. This also includes the availability at short notice of spare parts, as Tino Winterhalter can confirm.

Käsebellen therefore looks to the future with confidence: within the last five years the company has grown by 100 percent to a turnover of 40 million euros - and it has potential for further growth. The MULTIVAC thermoforming packaging machine is ready for this.

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ATTRACTIVE PRESENTATION IN A STAND-UP PACK

SLICED WAFER THIN, FOLDED AND APPETIZINGLY PACKED: THIS IS HOW BEL LEERDAMMER BV PRESENTS ITS SLICED CHEESE PRODUCTS, LEERDAMMER® ORIGINAL AND LEERDAMMER® CHARACTERE, AT THE POINT OF SALE.



Leerdammer® is among the ten most frequently sold cheese varieties worldwide: some four million blocks of the distinct cheese with the cherry-sized holes are sold annually in sliced form. With its mild nutty taste, the cheese variety is particularly popular with Western Europeans. In Germany, it is actually Number 1 in the country's cheese market.



The cheese specialist, Bel Leerdammer BV, has invested in a high-output thermoforming packaging line from MULTIVAC to produce the thermoformed consumer pack.

Since 2002 the Leerdammer Company has been part of the French Bel Group which annually supplies some 400 million consumers in 120 countries with its five international brands and 25 local brands. The Group currently has around 11,000 employees, operating in 33 subsidiaries and 27 production sites. In 2014 the company had a turnover of 2.7 billion euros. Bel is a member of the UN Global Compact and pursues a comprehensive CSR policy both internally and throughout the entire supply chain.

New eating experience with Leerdammer®: Wafer thin and folded

The key to Bel's success is its strength of innovation and the company's closeness to its markets: the product range is constantly updated, while new trends and consumer wishes are rapidly converted into new generations of products. Bel always tries to give consumers a special eating experience: "In addition to price and quality, aspects such as environmental awareness and lifestyle play an increasing role in our products. The consumer pack has a decisive part to play in this," says Theo Dopheide, packaging engineer at Bel Leerdammer BV in Schoonewoerd, a small village in the west of the Netherlands.

In January 2015 the cheese producer launched two sliced cheese varieties onto the market in a thermoformed pack, which was designed to be placed upright on the supermarket shelf: each pack contains ten Leerdammer® slices, which are sliced wafer thin and folded, in either the "Original" or "Charactere" flavor. Among the challenges in the development of the new pack format was defining

the internal and external pack dimensions and achieving the correct placement of the product in the pack. "Since the external measurements of the pack are specified as standard by the supermarkets, we were restricted in its design. In order to ensure that the quality of the cheese slices in their folded state was not impaired, we had to increase the internal measurements of the folded pack without stretching the external dimensions," explains Theo Dopheide. It was also essential that the cheese slices were not able to slip in the pack or protrude into the seal seam.

Bel Leerdammer BV developed and tested the new pack format in conjunction with MULTIVAC. The packaging specialist offers its customers the complete infrastructure of services for packaging development at its Training & Innovation Centre in Wolfertschwenden, and it gives advice on the design and development of individual packaging solutions.

Evaluation matrix establishes the advantages in performance and resource efficiency

MULTIVAC was able to convince the cheese producer of its capabilities through a selection process, in which several packaging machine manufacturers were taken into consideration. In order to find the right partner, Bel first requested a quotation from several suppliers. As part of the tender process, Bel introduced an evaluation matrix with weighting points. In addition to the price, criteria such as output, resource efficiency, waste reduction, life cycle costs and technical support were also taken into account.

The project team at Bel then evaluated the received quotations on this basis. MULTIVAC achieved the highest number of points. Crucial for the result was the

environmental and resource-saving e-concept technology, with which the machine manufacturer was able to best fulfil Bel's CSR policy requirements. However, MULTIVAC's good reputation and the performance of the machines also played a role. "When we produced our quotation, we placed particular emphasis on the resource efficiency of our packaging line. It had to consume as few raw materials as possible. This involved the usage of electricity, water, compressed air and inert gas, as well as the consumption of film, labels, printing ink and spare parts," explains Paul van Heezik, Account Manager for packaging machines at MULTIVAC Netherlands.

The R 535 thermoforming packaging machine, on which Bel Leerdammer BV ultimately decided, combines different approaches:

Keyword of film material: Innovative die geometry reduces the seal flanges in the cross-machine direction from 9 to 7.5 mm and in the longitudinal direction from 7.5 to 6 mm. The width of the edge trim can also be reduced from 39 to 32 mm through the use of an innovative evacuation and gas flushing solution. The partitions between the packs, which would otherwise remain as film trim after the cutting process, were reduced from 5 to 0 mm. "This technology enables us to reduce the consumption of film material by seven to eight percent," says Theo Dopheide with delight.

In order to avoid any film waste during a die change, the operators at Bel can control the required height in the forming and sealing stations via the recipe selection in

the user interface. The height is then automatically adjusted. This means that the film does not have to be severed each time.

Keyword of compressed air:

The pneumatic modules in the R 535 have been replaced with servo-driven modules, which means that no compressed air is required. This reduces the energy consumption of the machine by at least 20 percent when compared to similar models.

In order to label the packs, the R 535 is equipped with a cross web labeller for top and bottom labelling. In addition, the

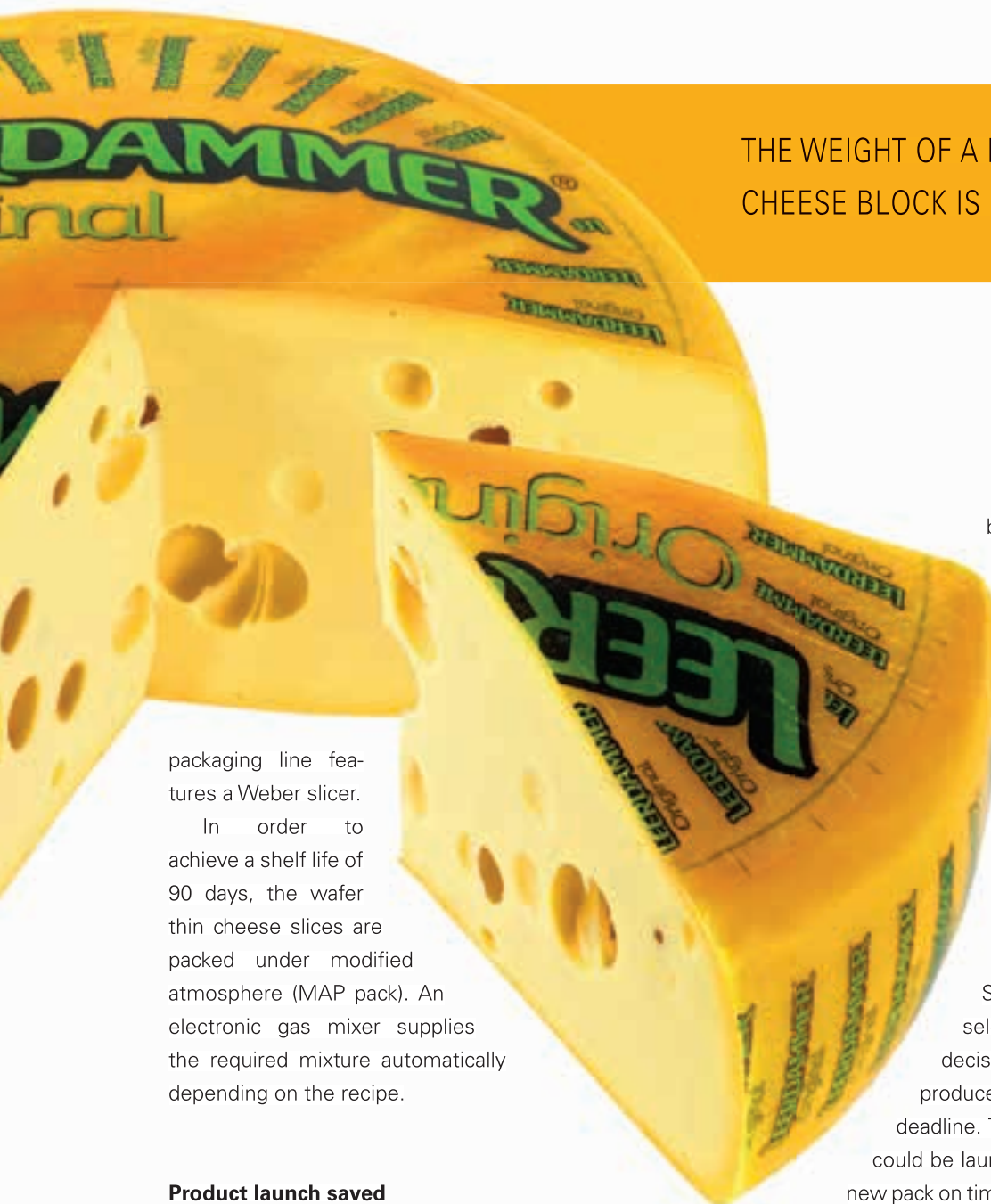


R 535 THERMOFORMING PACKAGING MACHINE

Cut-off length (mm)	< 1,300
Forming depth (mm)	< 210
Output (cycles/min)	< 21*
Hygiene standard	MULTIVAC Hygiene Design™

*Depending on the equipment





THE WEIGHT OF A LEERDAMMER®
CHEESE BLOCK IS 12.8 KG

packaging line features a Weber slicer.

In order to achieve a shelf life of 90 days, the wafer thin cheese slices are packed under modified atmosphere (MAP pack). An electronic gas mixer supplies the required mixture automatically depending on the recipe.

Product launch saved

In November 2014, the packaging line was installed and commissioned at Schoonrewoerd. However, several weeks before the launch of the new Leerdammer® products, Bel came to the conclusion that they would achieve an even better presentation of their products on the shelf if they had another pack design. This late change provided an enormous challenge for the project team. "The time schedule for the project allowed no time for such a late change," recalls Theo Dopheide.

But Bel had found a partner which keeps a cool head even in critical situations and is able to think outside the

box, when they partnered with MULTIVAC. Two new types of pack insert, which were based on the designs provided by Leerdammer, were produced with the superb support of MULTIVAC Resale & Service. "We developed two new types of pack insert and tested these within a few days on the new production line at the Leerdammer factory in Schoonrewoerd, allowing a final selection to be made. After the decision was taken, we were able to produce the final inserts within the set deadline. This meant the new products could be launched onto the market in their new pack on time in January 2015," recalls Paul van Heezik.

This practical approach and the active support in finding a solution to the problem - on time and to their full satisfaction - confirmed to the Bel Group that they had made the right decision in choosing MULTIVAC: "The collaboration with MULTIVAC is a best-practice example of good cooperation between customer and supplier. Together, we were able to eliminate any problems that arose before they became acute. We definitely decided on the right partner. We will also do exactly the same next time," says Theo Dopheide.



FROM FILM POUCH TO THERMO- FORMED PACK

IN 2014 THE SOCIÉTÉ INTERPROFESSIONNELLE DES BOUCHERS ET CHARCUTIERS ABATTEURS À SURGÈRES - SIBCAS FOR SHORT - REPLACED ITS CHAMBER MACHINE WITH A COMPACT R 085 THERMO-FORMING PACKAGING MACHINE. THE COMPANY WAS ABLE TO DOUBLE ITS OUTPUT, AND IT LAID THE FOUNDATION FOR FURTHER GROWTH.

With 90 employees SIBCAS is among the medium-sized market players in the French meat industry. The rendering and processing operation in Surgères, situated about 30 kilometres from the Atlantic coast, is one of the last privately run companies in the sector. When it comes to its often much larger competitors, SIBCAS has asserted itself successfully for decades: “Our trump cards are quality, closeness to customers, speed of reaction, and hard work that gives us all satisfaction,” says CEO Nicolas Joyet with pride. Using a strategy focused purely on the local market, the entrepreneur ensures SIBCAS remains firmly anchored in the region of Poitou-Charentes: “Whether it is cattle, calves, horses or lambs, our animals all come from regional breeders. We know the pedigree of every individual animal. Our customers, which include 250 butchers shops, around 50 supermarkets and a number of wholesalers, are all located here in the local area.”

Nicolas Joyet took over the municipal abattoir in Surgères thirteen years ago and successively expanded the rendering and processing capacity. A new processing line to the latest standards went into operation in 2014. The company now produces around 6,000 tons of meat on it per year. Nicolas Joyet also wants to increase the production area by 2016. The entrepreneur’s expansion strategy has already borne fruit. SIBCAS has recently been able to expand its portfolio to include thinly sliced beef, calf meat and lamb.

Bottleneck with the chamber machine

The entry into the new market segment created an initial problem for production: SIBCAS only had one chamber

machine, which was used to pack the individual pieces of rendered meat in vacuum pouches. This procedure had been well suited to the product range to date. However, packing in vacuum pouches reached its limits when it came to sliced meat products: “Due to the very high demand for the new product, the capacity of the chamber machine proved to be too small,” recalls Nicolas Joyet. The main problem was that loading took far too long. Four staff were needed to pack the required production quantity. “Therefore, our priority was to find a new packaging solution quickly.”

In the summer of 2014 SIBCAS turned to MULTIVAC. Following in-depth advice by the local sales adviser, SIBCAS decided on the R 085, currently MULTIVAC’s smallest thermoforming packaging machine. “This model was launched onto the market last year and is suitable for companies wanting to embark on automatic thermoforming packaging. The R 085 can be used to produce both vacuum packs and packs with inert gas,” explains Michaela Hattier of MULTIVAC France.

Entry into the thermoforming process was successful

The R 085 went into operation in Surgères at the beginning of October 2014. A MULTIVAC service technician was on site during the installation and assisted the customer with production of the first batches. Nicolas Joyet describes the first days of the launch: “We had never worked with this packaging procedure before. Operating our first thermoforming packaging machine was therefore a completely new experience for us. But we soon realized, that we had made exactly the right choice. We



R 085 THERMOFORMING PACKAGING MACHINE

Cut-off length (mm)	< 300
Forming depth (mm)	< 80
Output (cycles/min)	< 6*
Hygiene standard	MULTIVAC Hygiene Design™

*Depending on the equipment

can now react much more flexibly to the wishes of our customers, and we now use the machine for both sliced product and individual pieces.”

The R 085 is equipped with four standard format layouts to enable users to achieve this flexibility. It has a quick-change system for the forming and sealing dies with proven slide-in technology, which is integrated as standard in the die design. This makes it easier for staff to convert the machine to other formats. With a pack depth of up to 80 millimetres, the R 085 offers the rendering and processing operation a whole range of possibilities for pack design. This includes running both flexible and rigid films.

The staff at SIBCAS working on the R 085 quickly got to grips with the new system. The R 085 is equipped with


the IPC 06 machine control as well as the HMI 2.0 user interface with touchscreen.

Electric drives are used for the lifting units, as well as the transport chain. This means that the R 085 also fulfils the requirements for improved energy efficiency. It meets the MULTIVAC Hygienic Design™, which enables the machine to be cleaned easily from the inside and outside.

Thanks to its new packaging solution, SIBCAS can now assert itself even more on the regional market. Compared with its old packaging solution, the company has doubled its production quantity and is already thinking about purchasing a second thermoforming packaging machine, which will be installed in the new production hall.







MODERN TECHNOL- OGY MEETS LONG TRADITION

AN AMERICAN FAMILY BUSINESS PACKS HOME-MADE MEAT PRODUCTS, SAUSAGES AND HAM ON CHAMBER MACHINES AND THERMOFORMING PACKAGING MACHINES FROM MULTIVAC.

Since 1920 Ebels General Store in Falmouth has been providing the local population in the northern Michigan with products for its everyday needs. The business, which is now in its fifth generation, has remained down-to-earth and family-based, but it has also moved with the times: when the store started to see competition in the early 1980's from branches of various supermarket chains, Mark and Dawn Ebels began to manufacture sausage and meat themselves for their own butchery department. Today their sons Bob and Tom are active in the daily business of the two meat operations, the store and the associated catering operation.

Quality impresses

In addition to beef and pork products and those made from sheep, buffalo and goat meat, the range of home-made butchery products includes fresh and smoked elk meat from the region’s rich forests. In 1994 the roaring sales of the smoked speciality products led to the creation of the Little Town Jerky Company. “It is well known that one can buy first-class meat products at very fair prices in our General Store,” says Tom Ebels, CEO of the Little Town Jerky Company. “We also supply a large number of food stores throughout Michigan.”

The product range includes snack sticks, smoked snacks, Bratwurst and bacon, as well as the very popular home-smoked ham. In order to be able to offer all these products in vacuum packs, the company purchased a double chamber machine in 2010. “Unfortunately this model was very unreliable,” recalls Tom Ebels. “The constant downtime and frequent service work compelled us in 2012 to look for another solution.” The aim was not only

to reduce the number of breakdowns and repairs, but also to improve the packaging quality, extend the shelf life and increase the throughput. The machine also had to be as simple as possible to operate, even for untrained personnel.

Secure vacuum packs

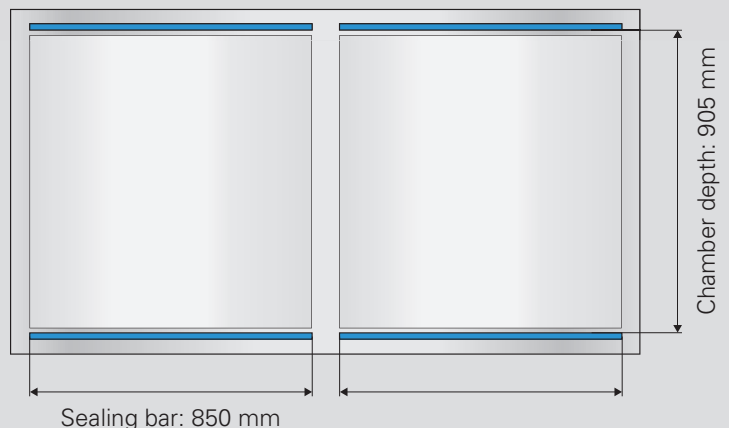
The choice was ultimately made for the MULTIVAC C 550 double chamber machine. The great advantage of double chamber machines is their increased output: while one chamber is being filled with film pouches, the vacuuming and sealing process can be carried out parallel to this in the second chamber. With its chamber size of 905 x 905 x 210 mm, the C 550 is also suitable for packing bulky products - which is ideal for the hams produced by the Little Town Jerky Company. The handling of the machine is simple, since the settings for the various packs can be saved as recipes. A sensor in each chamber monitors



C 550 DOUBLE CHAMBER MACHINE

Length of the sealing bar (usable) in mm	2 x 850
Chamber depth/width (mm)	905
Chamber height (mm)	210

- Large distance between sealing bars for long products
- MULTIVAC Hygienic Design™ for simple and reliable cleaning
- Double-seam sever sealing with severing wire and heating band which can be controlled separately
- Can be equipped with vacuum pumps up to 300 m³/h



the pressure during vacuuming and switches the pump off automatically, as soon as the desired pressure value is reached. In this way the chamber machine always achieves the same high packaging quality, and it offers precisely the high degree of reliability the family business demands for the packing of its premium-quality meat and sausage products.

“The first purchase order with MULTIVAC was larger than planned since we also ordered the R 105 thermoforming packaging machine in addition to the C 550,” recalls Bob Ebels, CFO of the Little Town Jerky Company. The compact entry-level model is primarily suited to small to medium-sized batches since it offers a standard configuration and pre-defined basic formats. This enables different products and portion sizes to be packed on one machine without long changeover times. The HMI 2.0 user interface with touchscreen display is intuitive to use thanks to its graphic user guidance, and this makes training on operation of the machine much easier. The R 105 is suitable not only for the production of vacuum packs but also modified atmosphere packs (MAP), enabling the meat and sausage products to remain fresh for longer. “The investment in a second system has proved to be sensible for us, since it gives us greater packaging flexibility. We can also achieve a higher throughput with the R 105,” says Bob Ebels, explaining the reasons for the investment. “We pack around 9,000 kg per week on the R 105.”

An investment that pays off

Before the purchasing decision was made, the family gathered a wide range of information and compared various quotations. Recommendations from business

partners and MULTIVAC’s good reputation aroused their interest. “The reason that we with our relatively small company decided on a packaging solution from the market leader was partly because MULTIVAC offered us an attractive finance model,” says Bob Ebels, who emphasizes that the banks at that time were not approving any loans for small companies.

The decision-makers in the family business were impressed from the start with the advice, service and short delivery times. The functioning and quality of the machines in production operation have fulfilled all expectations, as Tom Ebels explains: “Our investment has also paid off economically since downtime has been drastically reduced in comparison with the previous machine, and there has been a great increase in the efficiency of our packaging procedures. Our decision in favor of MULTIVAC has really paid off for us.”

When the company wanted to purchase a further packaging machine about a year later, the family business decided on another fully automatic MULTIVAC thermoforming packaging machine in the medium-sized output range. Further proof of the family’s satisfaction is provided by the two additional C 550 double chamber machines, which it has purchased for packing its meat and sausage specialities.

Business relationship of equals

“Every time we expand, MULTIVAC impresses us again with its speed of reaction and reliability. Our R 105 thermoforming packaging machine, which was ordered in autumn 2014, was delivered and installed punctually at the beginning of 2015,” says Bob Ebels. “The comprehensive advice and excellent service show, that the packaging

R 105 THERMOFORMING
PACKAGING MACHINE

Cut-off length (mm)	< 300
Forming depth (mm)	< 95
Output (cycles/min)	< 8*
Hygiene standard	MULTIVAC Hygiene Design™

*Depending on the equipment



specialists consider our small company to be just as important as a large manufacturer.” For John Powers from MULTIVAC USA, partnership of equals goes without saying: “Only when we conduct dialogue with the customer as equals, can we recognize the requirements of the particular company and find a solution that fits.” This is exactly what happened at the Little Town Jerky Company. Thanks to efficient procedures and secure packs, the butchery department can supply the store and its customers in the region with first-class meat and sausage products, as well as being able to grow further.



①

① The R 105 enables different products and portion sizes to be packed without long changeover times.

②

② Around 4,000 kg of meat and sausage products are packed per week on the thermoforming packaging machine.







TASTES EVERY BIT AS GOOD AS IT LOOKS

FRESCO FOODS INC. PACKS HIGH-QUALITY READY MEALS, MADE FROM FRESH, LOCALLY PRODUCED PRODUCTS, IN EXCLUSIVE VACUUM TRAY PACKS. THE START-UP BUSINESS USES A MULTIVAC T 300 FOR ITS READY MEALS.



The ready meals from Fresco Foods, marketed under the “Eat Fresco” brand, are called “Caribbean Style Jerk Chicken”, “Asian Shrimp Noodle Bowl” and “Balsamic Glazed Grilled Salmon”. They are sold in five businesses of the Winn-Dixie retail company in the Jacksonville area, as well as in other businesses in Tampa Bay on the west coast of Florida. The tasty and nutritious meals are prepared with fresh ingredients, such as pork, poultry and seafood, and they aim to make life easier for professional people and busy consumers: these stylish meals are ready to eat after just two minutes in the microwave.

“With our “Eat Fresco” product line we are changing the way in which ready meals are produced,” explains Robert Povolny, President and founder of Fresco Foods Inc. “Instead of ready meals that are industrially produced and frozen many times over, we adopt a fresh and regional approach.” When the company was founded in the summer of 2014, he consciously decided on another path from that of the established food manufacturers: “We prepare our products fresh on a daily basis. We use only natural and biologically grown ingredients. The meals are free of all preservatives. Our aim is to manufacture products, which make life easier for consumers and which make our customers feel good about eating. They should be able to enjoy a healthy and nutritious meal without having to compromise on taste and quality.”

Attractive presentation at the POS

Robert Povolny founded his company on a green-field site. At first he and a handful of employees started by developing the business model, before continuing with developing the products. It was clear from the start, not

only carefully selected ingredients, but also an attractive, consumer-friendly presentation at the point of sale would be crucial for the market success of the high-quality ready meals: “When the project started, I said to my chef: Our meals have to taste fantastic. I told my product designer: They must look absolutely irresistible. Both carried out my instructions perfectly, and my designer was able to draw on a fantastic packaging solution, which in my opinion is unique in the market.”

He is, of course, talking about MULTIVAC – Robert Povolny had already worked together with their sales team in a previous job: “I already knew back then, MULTIVAC is one of the market leaders for packaging solutions and is known for its quality and reliability. That is why I contacted my former sales contact at MULTIVAC USA as soon as I founded my company.”

When he first made contact, Robert Povolny was still not sure which packaging technology would be the right one for his product. In cases like this, MULTIVAC offers companies individual packaging advice and provides support with choosing the optimum technology, and with the selection of suitable consumer materials.

Reliable partner

“MULTIVAC was very helpful to us in this early phase of the project. I am really impressed by the added value that we obtained through our sales and service contacts. My sales contact not only had extensive knowledge about machines that might prove suitable, but was also highly familiar with all aspects of the American food industry and potential packaging methods. They were a huge help in starting up our production line and optimising the processes,” says Robert Povolny with praise.



T 300 TRAYSEALER

Pack tracks	≤ 3
Tray depth (mm)	< 120*
Output (cycles/min)	< 6*
Hygiene standard	MULTIVAC Hygiene Design™

*Depending on the equipment

After receiving detailed advice from MULTIVAC, Fresco Foods decided to seal the fresh ready meals under vacuum in high-quality white trays with a transparent upper web. The pack is then fitted with a cardboard sleeve, on which the brand name and the particular product are shown. The high-quality vacuum tray packs had two key advantages from the perspective of the start-up company: they present the freshness and natural quality of the meals, as well as ensuring that, thanks to the longest possible shelf life at the point of sale, the meals can be produced without preservatives. The ready meals are delivered fresh every day in refrigerated trucks to grocery stores, which sell them from chill cabinets.

When it came to the machine model, Fresco Foods decided on the smallest fully automatic traysealer model made by MULTIVAC, the T 300. The decisive features were primarily its compact design, its simple and reliable operating principle and its stainless steel construction, which makes it very easy to clean between the individual production batches. The intuitive MULTIVAC HMI 2.0 user interface made training much easier.

Compact space requirements

Robert Povolny still remembers very well production of the first batches: “We first started preparing the meals in a small kitchen where space was limited. When the tray-sealer was delivered, we had to remove a glass window temporarily, as the entrance was not large enough. After a few small teething problems, we were able to make a start – and I have to say, the performance of the T 300 is

fantastic. We are currently producing around 2,000 portions per week with our four employees. Our aim is to double our production output by the end of the year and to recruit new employees.”

The start-up company is well equipped with the T 300 for the planned growth. The automatic traysealer is not only capable of being integrated in a production line, but thanks to its quick-change system for dies, it can easily be converted to other formats and is able to run a wide range of films.

“Originally we wanted to buy a second-hand T 300,” says Robert Povolny, but he subsequently cancelled the purchase order due to the tight time schedule and ordered a new machine instead. “The change was no problem at all. All my contacts at MULTIVAC were extremely helpful and pleasant in their dealings with me. We value their flexibility very highly.” Fresco Foods signed an agreement with MULTIVAC on instalment payments for the purchase of the new machine, and this made the financing of the investment much easier for the start-up company at this early stage.

“I am very happy, not only with the machine, but with everything on which I worked together with MULTIVAC,” adds Robert Povolny. “With the help of the MULTIVAC team, we thought through all the details of the packaging in full. It was a clever decision to use vacuum packs. The market response to our unique product presentation has been very good.”

The feedback from grocers and consumers has also been unanimously positive: “Whenever I present the product line, the response is enthusiastic. A real bonus point is the fact that the consumer does not have to cut open the film or puncture it, instead only having to place the tray in the microwave. The pack ensures that the meal remains succulent, does not give off cooking smells and that the microwave does not need to be cleaned afterwards. My customers never tire of telling me: It tastes every bit as good as it looks.”



① The “Eat Fresco” ready meals are delivered fresh every day to selected grocery stores.



ONE OF MULTIVAC'S SUCCESS FACTORS IS THE SEAMLESS SUPPLY OF SPARE PARTS FOR ALL MACHINES INSTALLED WORLDWIDE.

IN ORDER TO IMPROVE THE PROVISION OF SPARE PARTS EVEN FURTHER, MULTIVAC IS INVESTING 11.9 MILLION EUROS IN THE CONSTRUCTION OF A NEW LOGISTICS CENTER AT THE COMPANY'S HEADQUARTERS IN WOLFERTSCHWENDEN. VOLKER STARRACH, SENIOR DIRECTOR OF LOGISTICS AT MULTIVAC, EXPLAINS HOW THE LOGISTICS PROCEDURES WILL CHANGE AND HOW CUSTOMERS WILL BENEFIT FROM THIS INVESTMENT.

Mr Starrach, what is the purpose of building a new Logistics Center?

Volker Starrach: The new Logistics Center is the first step in the realignment of our logistics concept. The aim is to optimise the supply of spare parts to our European subsidiaries by implementing a centralised handling process. The supply of materials for our machine production in Wolfertschwenden will also benefit from the new procedures.

"OUR CUSTOMERS WILL BENEFIT FROM BETTER AVAILABILITY AND THEREFORE SHORTER DELIVERY TIMES FOR SPARE PARTS."

To what extent will the internal logistics procedures change?

Volker Starrach: In future, we will be working with modern warehouse technology. Order picking will change from the "Man-to-item" principle, i.e. where the static parts are removed by staff from the storage bins, to the

"Item-to-man" principle. In future, the spare parts will be automatically transported from their storage bins to the person picking the order. The automation will enable the picking output to be increased, while also reducing the susceptibility to errors. Thanks to the very latest technology, the procedures will become much more efficient overall. In addition to this, the use of SAP Extended Warehouse Management (SAP EWM) will create greater transparency within the logistics procedures.

And to what extent will the external logistics procedures change?

Volker Starrach: Among other benefits from the new Logistics Center, we will be pursuing the aim of providing our European customers with a faster service direct from Wolfertschwenden for those spare parts that are required less frequently.

Which technical aspects of the Logistics Center are particularly worth mentioning?

Volker Starrach: A particular mention should be given to the automatic storage area for small parts, which has more than 19,500 small load carriers that can be further subdivided. This means that we can effectively create 30,000 storage places for small parts. The Logistics Center will also have a narrow-aisle warehouse for the storage of pallets, as well as several high-output workplaces for order pickers. There will be integrated packaging workplaces for packing the spare parts and these will be separated for large items and small items. And last but not least, SAP EWM will be introduced throughout all procedures.

Which countries will be affected by the changeover?

Starrach: All European countries will be affected by the new procedures since in future, we will increase the number of European customers being supplied with spare parts directly from our Logistics Center.





The new developments will also affect the way our module assembly and final assembly departments in Wolfertschwenden are supplied with parts. This is because the internal supply of materials will also be served by the new Logistics Center.

What benefits will there be for customers?

Volker Starrach: Our customers will benefit from better availability of spare parts and therefore shorter delivery times. In addition to this, errors in order picking and potential incorrect deliveries will be reduced.

From a logistical point of view, a more efficient and faster supply of production materials to our business divisions will have a positive impact on the throughput times of the machines.

When is it planned for the Logistics Center to be put into operation?

Starrach: Our Logistics Center is planned to be put into operation in the second quarter of 2016. We are working on the basis that, following a start-up phase, the Logistics Center will be integrated and in full operation in the second half of next year.



- ① State of construction at the end of July 2015
- ② Construction of the area on the northern side (goods receipt and office complex), April to June 2015
- ③ Start of the work on the foundations, March 2015
- ④ Completion of sprinkler tank, acceptance at the end of January 2015



GLUTEN-FREE



DID YOU KNOW,

THAT THERMOFORMING PACKAGING SOLUTIONS
FROM MULTIVAC OFFER BENEFITS WHEN PACKING
GLUTEN-FREE BAKERY PRODUCTS?

The demand for gluten-free bakery products is rising - and not just because a growing number of people suffer from gluten intolerance, but also because food without gluten is seen as part of a trend towards healthy nutrition. The packing of gluten-free bakery products does however place special demands on the systems that are used.

DID YOU KNOW



GLU

400,000
patents in Germany



GLUTEN-FREE
20 ppm (20 mg/kg)

70 MILLION
Those affected worldwide

€ 40 MILLION
Market volume in Germany

Bread, bakery products and other food that contain gluten are taboo for those affected by celiac disease. Celiac disease is a chronic, autoimmune disorder, which is caused by a lifelong intolerance to the protein composite gluten. This is contained in cereals such as wheat, spelt, rye, barley, oats and green spelt, as well as in old types of wheat, such as emmer or einkorn wheat. Gluten-containing cereals and all food that contains these cereals, even in small traces, are unsuitable for those affected by celiac disease.

It is estimated that 70 million people¹ are affected by

availability, their reaction with other ingredients, the predisposition to changes in the manufacturing process, or other features that make the product more attractive for the consumer.⁴

Many gluten-free bakery products can be manufactured with the equipment in a conventional bakery. The greatest challenge is ensuring that the statutory limit values are maintained, since bakery products can only be declared as "gluten-free", if the gluten content does not exceed the limit value of 20 ppm (20 mg/kg). The danger of cross-contamination during production is particularly



this food intolerance worldwide, of which 400,000 alone are in Germany² - a rising trend due to improved diagnosis and a growing awareness of the disorder. The only treatment for celiac disease is gluten-free nutrition for life.

Although the products on offer are still limited in some countries, a large number of manufacturers are now offering gluten-free food. The market volume for gluten-free products in Germany is around 40 million euros³. In addition to inherently gluten-free food, there are also many new product formulations in which standard food products are imitated - but without the addition of gluten-containing ingredients. Such new product formulations can involve significant technological and scientific challenges, particularly when it is a question of achieving the sensory characteristics of the comparable gluten-containing product. The ingredients have to be selected on the basis of different criteria, e.g. their function in the product or the consequences of leaving them out, the costs and

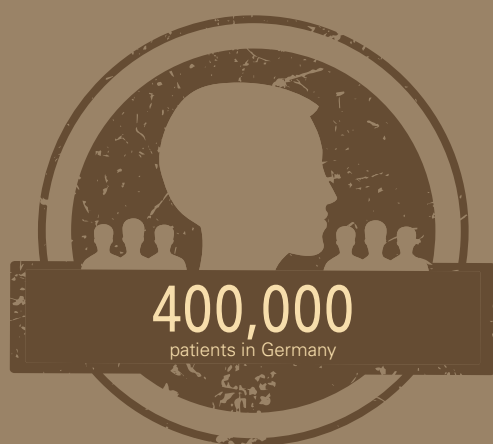
high. The operating parameters must not be automatically transferred from the conventional manufacturing process, since the baking or cooking conditions for example have to be optimised for gluten-free products. Most gluten-free bread and rolls are par-baked which can be stored under various conditions, i.e. frozen, chilled or at room temperature. The baking is completed prior to sale or immediately before consuming.

Requirements for packaging gluten-free bakery products

Gluten-free bakery products also place special demands on the packaging. The shelf life of gluten-free bakery products is generally very short due to the loss of moisture and aroma. The absence of gluten often leads to a more fluid dough or to bread with a brittle texture after baking, and such bread is paler and has other negative

characteristics compared with a conventional product. If gluten-free bread is stored at room temperature, there is also a loss of quality due to mould formation or staling. Packs with modified atmosphere (MAP) are generally used to extend the shelf life of gluten-free products. Carbon dioxide (CO₂) inhibits the development of yeast and bacteria, and it has an anti-fungal effect against mold. For this reason it is frequently used for packing bakery products, sometimes in conjunction with nitrogen as a supporting gas to reduce the diffusion of inert gas from

The benefits of thermoforming packaging compared with flow-wrapped packs, which are frequently used for bakery products, include a smaller consumption of inert gas and the ability to control the atmosphere in the pack more precisely by using barrier films. It is also of benefit to be able to load product more easily from above into the pack, particularly for products such as sliced loaves. MULTIVAC also offers fully automated thermoforming packaging solutions for packing sliced bread and bakery products in large batches. Special handling modules are used for



the pack; the nitrogen is completely neutral in its effect on the packaged product. By reducing the oxygen content in the pack to less than one percent, the growth of yeast and many bacteria can be slowed down, while mold formation is completely prevented. Due to the different consistency between gluten-free and conventional gluten-containing products, the MAP mixture has to be individually tested for each formulation when packing gluten-free bakery products.

MULTIVAC packaging solutions are suitable for the efficient and reliable packing of both conventional and gluten-free bakery products. Thermoforming packaging machines of all sizes and outputs, equipped with a gas flushing system, are particularly suitable for these products. A mixing and control unit (gas mixer) precisely control the composition of the modified atmosphere from several component gases, although special pre-mixed gas mixtures are available for many bakery products.

feeding and loading the bread slices. The integration of additional functions, such as inline labelling, printing and quality inspection, offers a high degree of process reliability. This is particularly important for consumers in the labelling or marking of gluten-free bakery products.

MULTIVAC provides ideal conditions for carrying out packaging tests in its Training & Innovation Center at its headquarters in Wolfertschwenden. It is there that customers have the opportunity to develop and test a wide range of packaging concepts for their products, such as pack types and product-specific gas mixtures for gluten-free bakery products.

¹ Source: Association of European Celiac Societies (AOECS)

² Source: Deutsche Zöliakie Gesellschaft e.V. (DZG)

³ Source: Lecture by Dipl.-Ing. Udo Hanneforth at the 62. Conference for Bakery Technology 2011 in Detmold.

⁴ Cf. New product development: The case of gluten-free food products. In: Gluten-free Cereal Products and Beverages, 2008, p. 413-431. Alan L. Kelly, Michelle M. Moore, Elke K. Arendt.

2015

Trade fairs	from	to	City	Country	
The Restaurant Show	15.10.05	15.10.07	London	UK	OCTOBER
BAKEPOL	15.10.10	15.10.13	Lublin	Poland	
Anuga Foodservice	15.10.10	15.10.14	Cologne	Germany	
JAPAN PACK 2015	15.10.13	15.10.16	Tokyo	Japan	
SÜFFA	15.10.18	15.10.20	Stuttgart	Germany	
Foodtec	15.10.19	15.10.21	Beijing	China	
Scanpack	15.10.20	15.10.23	Gothenburg	Sweden	
CARNEXPO	15.10.21	15.10.24	Bucharest	Romania	
Gulfood Manufacturing 2015	15.10.27	15.10.29	Dubai	UAE	
INDAGRA	15.10.28	15.11.01	Bucharest	Romania	
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FPPE	15.11.03	15.11.05	Nairobi	Kenya	NOVEMBER
MEAT DAYS 2015	15.11.07	15.11.09	Athens	Greece	
Andina-Pack 2015	15.11.10	15.11.13	Bogotá	Colombia	
Bocuse D'or, SIHRE	15.11.11	15.11.14	Sofia	Bulgaria	
COMPAMED	15.11.16	15.11.19	Düsseldorf	Germany	
Pharmtech	15.11.24	15.11.27	Moscow	Russia	
EMPACK	15.11.25	15.11.26	Brussels	Belgium	
Gwangju International Food Fair 2015	15.11.26	15.11.29	Gwangju	Korea	

2016

Trade fairs	from	to	City	Country	
Horecava 2016	16.01.11	16.01.14	Amsterdam	Netherlands	JANUARY
IPPE	16.01.26	16.01.28	Atlanta, GA	USA	
Medi-Care Foods Expo 2016	16.01.26	16.01.27	Tokyo	Japan	
FRUIT LOGISTICA	16.02.03	16.02.05	Berlin	Germany	FEBRUARY
West Pack	16.02.09	16.02.11	Anaheim, CA	USA	
Supermarket Trade Show 2016	16.02.10	16.02.12	Tokyo	Japan	
HOTERES JAPAN 2016	16.02.16	16.02.19	Tokyo	Japan	
Easyfairs, EMPACK 2016	16.02.17	16.02.18	Lillestrøm	Norway	
INTERGASTRA	16.02.20	16.02.24	Stuttgart	Germany	
Packaging Innovations	16.02.24	16.02.25	Birmingham	UK	
Hotelympia	16.02.29	16.03.03	London	UK	
Foodexpo	16.03.06	16.03.08	Herning	Denmark	MARCH
Seafood Expo, Seafood Processing North America	16.03.06	16.03.08	Boston, MA	USA	
Cfia	16.03.08	16.03.10	Rennes	France	
HealthPack	16.03.15	16.03.17	New Orleans, LA	USA	
PROPAK AFRICA 2016	16.03.15	16.03.18	Johannesburg	Africa	
EXPO ANTAD	16.03.16	16.03.18	Guadalajara	Mexico	
WorldFood Uzbekistan 2016	16.03.16	16.03.18	Tashkent	Uzbekistan	
Fine Food Australia	16.04.10	16.04.12	Brisbane	Australia	APRIL
EMPACK 2016	16.04.12	16.04.14	Utrecht	Netherlands	
Food and Hotel Asia	16.04.12	16.04.15	Singapore	Singapore	
Label & Print 2016	16.04.12	16.04.14	Utrecht	Netherlands	
Medtec Europe	16.04.12	16.04.14	Stuttgart	Germany	
Pharma-Kongress	16.04.12	16.04.13	Düsseldorf	Germany	
The 41st Japan Meat Industrial Fair 2016	16.04.13	16.04.15	Tokyo	Japan	
Dessert Sweets & Drink Festival 2016	16.04.13	16.04.15	Tokyo	Japan	
DJAZAGRO	16.04.18	16.04.21	Algiers	Algeria	
Foodex	16.04.18	16.04.20	Birmingham	UK	
Petfood Forum	16.04.18	16.04.20	Kansas City, MO	USA	
National Culinary Cup of Bulgaria 2016	16.04.22	16.04.23	Plovdiv	Bulgaria	
Seafood Processing Global	16.04.26	16.04.28	Brussels	Belgium	

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