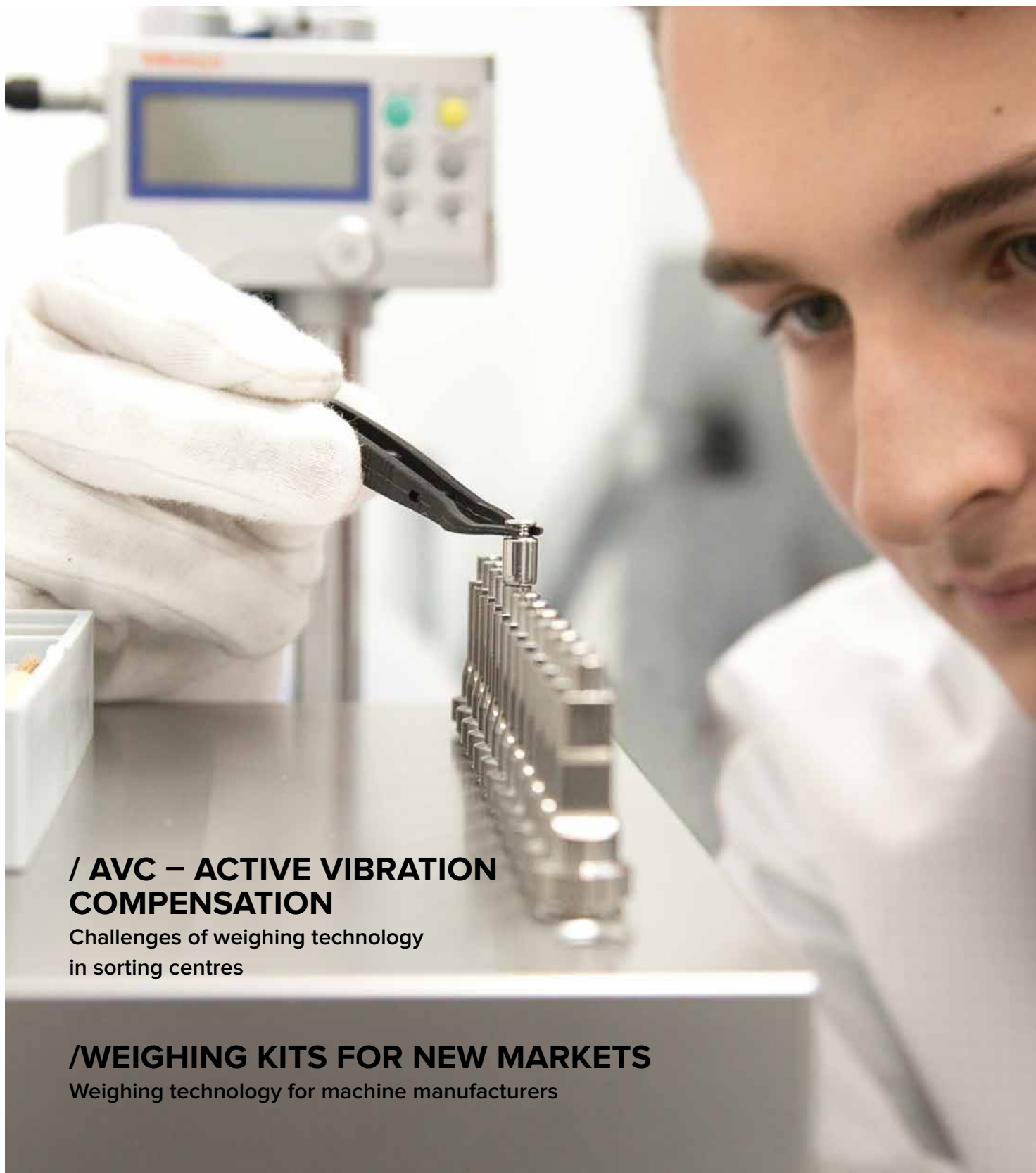


WEIGH UP



/ AVC – ACTIVE VIBRATION COMPENSATION

Challenges of weighing technology
in sorting centres

/WEIGHING KITS FOR NEW MARKETS

Weighing technology for machine manufacturers



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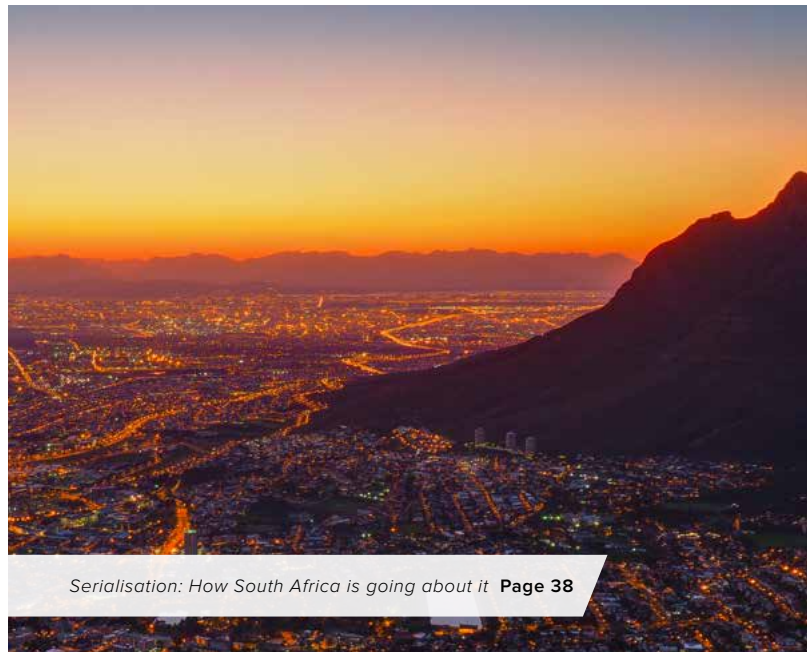
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WHAT DRIVES US AND MAKES US BETTER

Theo Düppre, Founder and CEO WIPOTEC Group

Every person needs something that spurs them on to special achievements. Does this apply to creativity as well? To the ability to create something new or original and at the same time useful or practical? The reasons for this are many and varied. Here is an unexpected idea; inspiration is a spontaneous suggestion that is oftentimes the starting point for artistic creativity. How does this play out at WIPOTEC, in an environment characterised by technology?

Personally, I don't think technical creativity is spontaneous. Nor do I believe that it's reserved only for those who, by virtue of exceptional talent, can come up with particularly imaginative and creative ideas. The reality is more complex. The latest research results paint a different picture. There's a close connection between professional expertise and creative results.

How we encourage creativity

Since the creativity of our employees is crucial to the innovative strength of our company, we certainly encourage it to flourish at WIPOTEC. To do this, we create an environment that rewards the acquisition of further professional and technical skills and we offer individual freedom in the workplace.

From my own experience, I know that in addition it requires a crystallisation point, a starting point, as a springboard to broader development. In the past, this was often provided by competitors who considered certain tasks unsolvable or not achievable with reasonable effort. For us, on the other hand, we never thought it unreasonable to search for our own ideas to solving these problems. Einstein thought that a good idea could be recognised by the fact that it appeared impossible to implement from the outset. We agree with him, and "There's no such thing as can't" is also the motto of WIPOTEC.

When we're at our most creative

Our employees are encouraged to think and act with this motto in mind. In many cases, this demands perseverance. Problems and challenges can't be solved overnight, constructive tenacity is often required and for this we give our employees the time needed. People are at their most creative when they are motivated by a passionate interest, rather than just by the prospect of a final reward. Our doors are always open, even my own, if you need any help to implement your ideas. At WIPOTEC no-one is put at a disadvantage if those ideas ultimately fail to work out. Very often we have discovered that these solutions do actually exist – you just have to look for them hard enough and clear the way for them.



People are at their most creative when they are motivated by a passionate interest.

Theo Düppre
Founder and CEO WIPOTEC Group

We support our employees and encourage them to persevere in conflicting and uncertain situations as a way of learning to cope with them, and at the same time avoiding solutions that are too quick or one-sided. It's also important for us to believe in our own creativity. We are convinced that believing in our own competencies means that we don't give up as easily when there are difficulties.

Openness to criticism and courage to change

What other features influence personal creativity? We might mention openness to criticism and the courage to change. And, of course, the will to succeed which affects the whole company. A good idea alone is not enough, the markets must be convinced by the value of the idea. This is the only way to create a demand which increases its value.

I know many examples at WIPOTEC for which these statements apply. We are an innovative company because our employees are innovative. It is important for me to emphasize this connection.

Let's take the weight-accurate cutting of cheese as an example. For a long time, because of the proverbial holes in the cheese, this was a challenge for which no-one had a solution until we finally found it. Using X-ray inspection, we identify the holes, their position and size and thus enable cutting machines to perform weight-accurate cutting. Based on this solution, our customers are able to bring to market superior cutting machines featuring maximum product yield for cheese and other products with significant differences in density. The huge demand for them illustrates the value of this idea.

What makes us better

I am convinced that this increased intelligence in terms of mechanics and electronics makes our systems superior to others in precision and speed. This is the tangible proof of our employees' creativity. It can be seen in the innovations that we can offer in the markets with our machines while others are not yet ready. Another example: At the time when we were first introducing our ultra-fast letter scales to the market, there was no technology for weighing letters that were transported at high speed via sorting systems. It did not exist because no-one believed it was possible to carry out precise weighing operations at these speeds. We showed that it is possible. And it's another reason why today we are the technological market leader in intelligent weighing and inspection systems.

Rising to challenges

If it's true that rising to challenges promotes growth, then we certainly owe our impressive growth in recent years to the fact that you have repeatedly challenged us. So today, I'd like to ask you to continue to confront us with your challenges. Even those for which there is no satisfactory solution yet. I promise you that our employees will do everything in their power to find this solution, even if we don't have a ready-made answer to your requirement right now.

For future problems – and for those we are already aware of – we will do our utmost to find solutions. Challenge us! You're welcome to do that at any time. Based loosely on Dante Alighieri: Some sit back and wait for the times to change, but others simply roll up their sleeves and dig in to make change happen.

I wish you every success with your ventures.

Theo Düppre



/ DEAR CUSTOMERS,

The WIPOTEC Group can look back on a very successful year. In 2018, our sales increased by a third. It was also the year in which we celebrated our 30th anniversary. It is your orders that made this extraordinary growth possible. This growth is also reflected in the WIPOTEC Academy for Advanced Training, Vocational Training and Customer Training which we will be opening in Kaiserslautern in 2020. The building will be home to our global service department and will also provide approx. 1,000 m² of additional production space. Our company will invest 18 million euros in it.

At this point, I would like to thank you for your trust: your trust in our systems and in the skills of our employees. It shows us that we are still on the right track. This trust, which many of you have placed in us for decades, continues to spur us on to bring high-performance products to market so that we can support you with optimum, yet at the same time flexible, solutions.

There are many challenges to overcome in doing this as you yourself know best. Your markets are changing, so are the technical requirements and, of course, the legal ones too. Those who are not positioned flexibly enough will find it difficult to adapt to the changes in good time.

In this edition of our Weigh Up magazine, we show you once again how we have responded to these challenges – with many examples from customers who are successfully using our systems.

I hope you enjoy reading it.



/ THEO DÜPPRE

Founder and CEO WIPOTEC Group

WIPOTEC GROUP

Leading trade fairs: ACHEMA and IFFA

*WIPOTEC presents new
machine solutions. **Page 12***

WIPOTEC-OCS comes to Mexico

*Increased presence in latin America. **Page 16***



/ WIPOTEC ANNIVERSARY CELEBRATION IN KAISERSLAUTERN

On 14 September last year, the WIPOTEC Group celebrated its anniversary with a party in Kaiserslautern to commemorate the founding of the company 30 years ago. All the employees, business partners and long-term business associates as well as many guests of honour were invited.

After Theo Düppre, company founder and CEO, had welcomed the guests, Dr. Klaus Weichel, Lord Mayor of Kaiserslautern, referred in his laudatory speech to the huge importance of the company for the city of Kaiserslautern. In the words of the Lord Mayor, the company founded by Theo Düppre and Udo Wagner in 1988 graces the city in an incredible way. In his presentation, Prof. Dr.-Ing. Winfried Lieber, President of the University of Applied Sciences Offenburg, praised the basic principles of company founders Theo Düppre and Udo Wagner. He said that both had a lasting influence on the development of today's WIPOTEC Group. Following the guest presentations, the anniversary celebrations continued with an entertainment programme for the guests. ▲

*In 2018,
the Kaiserslautern
University of
Applied Sciences
also awarded
prizes to
two mechatronics
students at
WIPOTEC.*



/ WIPOTEC-OCS: NEWS FROM SPAIN AND THE USA

20 years of WIPOTEC-OCS in the USA: the first ever WIPOTEC-OCS sales office outside Europe was founded in October 1998. In August 2018, WIPOTEC-OCS USA, the largest foreign subsidiary of WIPOTEC-OCS, celebrated its 20th anniversary with a team event in Helen (Georgia). More than 70 employees, business partners and customers gathered at a further customer event on the Magnificent Mile in Chicago, a boulevard of exclusive shops, museums and elegant hotels.

10 years of WIPOTEC-OCS in Spain: for WIPOTEC-OCS, the route to becoming the market leader for high-end solutions in the control and testing technology sector in Spain began in 2008 with the introduction of its own product range. On 9 May 2018, the Spanish branch of WIPOTEC-OCS celebrated its 10th anniversary near Montjuïc, one of Barcelona's two local mountains. Customers were also invited to the event. ▲



/PROMOTING METROLOGICAL PROGRESS

WIPOTEC is a long-standing member of Helmholtz-Fonds e.V., which is dedicated to promoting research in the field of physical and technical precision measurement. In 2018 WIPOTEC again promoted metrological progress in Germany by continuing its membership. Helmholtz-Fonds e.V. not only supports the Physikalisch-Technische Bundesanstalt (PTB), Germany's national metrology institute, in carrying out its tasks, but also champions young scientists. The association awards prizes for excellent work and the Helmholtz Prize for outstanding achievements in the field of precision measurement. The award is endowed with 20,000 euros. ▲

THREE DECADES OF INNOVATION

In September 1988, Theo Düppre and Udo Wagner founded WIPOTEC Wiege- und Positioniersysteme GmbH as a spin-off of Kaiserslautern University. The idea and implementation of a fast Weigh Cell in monoblock architecture gave rise to a group of companies whose name is now inextricably linked to dynamic weighing technology and inspection systems.





*Some sit back
and wait for the
times to change,
but others
simply roll up
their sleeves
and dig in
to make change
happen.*

Dante Alighieri

Italian poet and philosopher
(1265–1321)

The idea for this was born more than three decades ago, “I got talking to a manufacturer of lighting consoles in a pub in Kaiserslautern,” Theo Düppre still remembers very well. “He told me over a beer that he needed a set of scales that would immediately show the postage for a letter rather than the weight. And I thought to myself, that’s doable.” Theo Düppre, who was working at the time as an assistant to the Chair of Optical Communications Engineering at Kaiserslautern University, accepted the challenge and developed the electronics for letter scales of this type. He bought a set of standard scales in a local stationery shop, replaced the pointer with a film, coded it – and after a few weeks presented the first prototype to the lighting console manufacturer. This was so well received that it later went into series production and was sold 12,000 times. By this time at the latest, Theo Düppre knew that he had a certain entrepreneurial spirit about him, “There was always an inner compulsion, I just couldn’t help it,” he says looking back. During this time, he also met Udo Wagner, who in those days was an apprentice at the TU Kaiserslautern.

Theo Düppre speaking on the occasion of the company’s 30th anniversary



When Theo Düppre talks about the philosophy of WIPOTEC, he likes to quote a great thinker. “The genius Albert Einstein once said that you can recognise a good idea by the fact that it appears to be impossible to implement from the outset.” Weighing goods continuously? In a fraction of a second? Hundreds a minute? To the milligram? In the 1980s, that sounded utopian. For the majority of people at least, but not for him, “I’m someone who is actually spurred on by pessimism. Instead of giving in, I always say: bring it on!”

2018 the anniversary celebration in the place where the company was founded. On 14 September last year, the WIPOTEC Group, which has now grown to 700 employees, celebrated its anniversary at the company’s headquarters in Kaiserslautern. All the employees, business partners and long-term business associates as well as many guests of honour were invited. In his review, Theo Düppre, Founder and CEO WIPOTEC Group, described developments over the last five years. During this period, WIPOTEC had grown enormously; both sales and also the number of employees had doubled in the past five years.

More than worth mentioning: the company’s assumption of responsibility for training. WIPOTEC is currently investing 18 million euros in the new WIPOTEC Academy in Kaiserslautern alone. Added to this, the company supports the universities, training within the company and the young talent programmes promoted in the municipal schools. Today, WIPOTEC is the fastest growing company in the region.▲

OPEN HOUSE

When do you ever get the chance to look behind the scenes of a world market leader for industrial weighing and inspection solutions? More than 6,000 visitors accepted the engineering company's invitation to find out about products and solutions, which set out on their journey from Kaiserslautern to all corners of the world.



Can there be a better chance to find out about training possibility, the professional environment and individual development opportunities than on a day when all the doors are open? The Open Day provided visitors with the ideal chance to get advice about starting a career at WIPOTEC. WIPOTEC training managers were available to answer questions; trainees were happy to recount their experience, talk about the corporate culture and the promotion of professional development. Employees from

the HR department presented a range of future-proof jobs in a successful and globally expanding company, for example in connection with training as a mechatronics engineer or as part of a dual degree course.

An experience in a class of its own

One bright sunny Saturday last May, the doors to the WIPOTEC Group's central production facility in Kaiserslautern opened punctually at 10 am. A highly varied programme of events was



Many demonstrations in a wide variety of areas ensured enthusiasm among the spectators

lined up for the visitors, among them the company's employees and their families and friends in addition to customers and business associates. Lots of attractions, product demonstrations, music and a top class children's programme ensured an unforgettable overall experience, the likes of which are not often seen in the region. More than 200 WIPOTEC employees were involved in developing the overall programme for the Open House Day at WIPOTEC, designed to guarantee a great experience for all visitors.

Employees with great passion for the founder-managed enterprise and its innovative solutions told the interested visitors about the individual sections and their work in the WIPOTEC Group. From control cabinet construction to Weigh Cell assembly, electronics production to machining, there were many opportunities to experience the machines and systems in action at different stops around the company site.

Quality assurance made by WIPOTEC.

In the X-ray inspection section, visitors had the unique opportunity to inspect the contents of sealed pizza boxes. Based on the modules of an X-ray scanner, they were also shown the inspection technology needed to check filling levels, shape and completeness and to identify foreign bodies, product faults and other quality deficiencies, even in products that are already packaged.

In the field of Track & Trace, the pharmaceutical systems specialists showed how WIPOTEC TQS machines provide the folding boxes for prescription medications with counterfeit-proof marking, give them tamper-evident seals and weigh them in a single pass. Rejected products are ejected on the spot. A clear demonstration here of the serialisation and traceability of medicines. An indispensable safeguard and now a legal requirement worldwide.

Tinkering desirable: young talents are inspired by technology at an early age



Very important (young) persons

The little ones among the visitors also got their fair share of the fun with an inflatable climbing wall, face painting, chance to drive a child-size forklift, a bouncy castle and a photobox booth. WIPOTEC's commitment to children, however, is not limited to the Open House Day. While on the premises, there was also chance to look around the first privately financed company nursery in the Kaiserslautern area which opened in 2014. WIPOTEC's integrative day care centre for children, which can be accessed not only by company employees, currently cares for 55 children. The generously staffed day care centre includes a total 4,700 m² of space.

Both young and old were able to relax in the sunshine and almost midsummer temperatures while enjoying food and refreshments with musical accompaniment. On the Open House Day, all drinks and meals were served at a token price and the proceeds of the overall event were donated to regional charities. WIPOTEC's social commitment is dedicated to fighting the consequences of poverty in old age, supporting children and young people, and people with disabilities. Social responsibility, seen in action by all the visitors and employees, even at the WIPOTEC Open House Day.▲

LEADING TRADE FAIRS: ACHEMA AND IFFA

Pharmaceuticals and food: both markets are among the fastest growing sectors of the WIPOTEC Group. A good enough reason to surprise trade visitors to ACHEMA and IFFA with a spectacular display of products.



Major industry trade fairs such as ACHEMA or IFFA provide global machine builders with an excellent platform for presenting their latest product developments to an international audience. Both trade fairs held in Frankfurt/Main only take place every three years. The WIPOTEC Group from Kaiserslautern took advantage of these events. WIPOTEC showcased a large number of new machines and solutions both at ACHEMA, world forum and leading international trade fair for the pharmaceutical process industry, and at IFFA, leading international trade fair for the meat industry. At impressive live demonstrations, trade fair visitors were able to see for themselves the qualities of the systems on display.

ACHEMA – leading trade fair for the pharmaceutical industry

From 11 to 15 June 2018, the WIPOTEC Group's trade fair stand at ACHEMA hosted a wide range of integrated serialisation

solutions for Track & Trace projects. All have one unique selling point in common: they can be implemented in a very short time. These solutions, known as Traceable Quality System (TQS) Fast Track, with their lead time of six weeks, are often the only chance for pharmaceutical companies to meet tight serialisation deadlines.

The portfolio presented includes the full range of modular systems for the serialisation, aggregation and tamper-evident packaging of individual folding boxes and HDPE pharmaceutical containers. TQS-CP-Bottle is positioned immediately at the outlet of labellers and offers 360° all-round inspection and label verification of bottles or vials. At ACHEMA, WIPOTEC presented pharmaceutical-compliant heavy load checkweighers, IP65-specified systems constructed entirely in stainless steel and solutions for automated and continuous precision weighing of ultra-lightweight stick packs, capsules and blister packs in the milligram range.



A large influx of visitors at ACHEMA 2018 in Frankfurt



TQS-CP-Bottle: reliable 360° all-round inspection for semi-automatic aggregation

IFFA – leading trade fair for the meat industry

At IFFA in May 2019, product presentations for the meat industry focused on the new wash-down series (SC-WD) of WIPOTEC-OCS X-ray scanners. The series meets protection class IP69K, crucial for the meat industry, and enables reliable product inspection in wet areas. A triple combination of innovative X-ray technology, proven checkweigher technology and vision inspection was also presented for the first time. The SC-W-V not only examines products for foreign bodies and weight, but also subjects them to an additional vision check. Another combination system, this time consisting of vision inspection and checkweigher technology, is the HC-A-V. As well as a precise weight check, it also offers visual product inspection. Also featured was the SC-2000, an extremely compact X-ray scanner with a system length of only 700 millimetres, designed for very cramped conditions.

At the WIPOTEC Group's stand at IFFA, OEM manufacturers had chance to familiarise themselves with the latest series of ultra-fast precision Weigh Cells and high-tech weighing systems which were presented by WIPOTEC Weighing Technology. For visitors interested in Quality Data Management solutions, the Comscale Demonstrator provided a welcome opportunity to try out WIPOTEC software for networking any number of checkweighers and other inspection devices (X-ray scanners, metal detectors) set up across all sites. ▲

IFFA 2019: WIPOTEC showcases vision inspection machines for checkweighers and X-ray systems



SUPPORTING TALENT

TEAM WIPOTEC with years of tradition





TEAM WIPOTEC 2018

“ We are happy to have WIPOTEC as a reliable and future-oriented namesake for our U19 federation team.

Jan Christmann

President of the Rhineland-Palatinate
Cycling Federation

There's a long tradition of cycling at WIPOTEC. Co-founder Udo Wagner is a passionate cycling coach who is committed to youth development at WIPOTEC. Attributes such as speed, precision and excellence make both the U19 Bundesliga team and WIPOTEC's solutions stand out: a perfect collaboration between two partners with the same philosophy.

A kick-off event for all riders and officials was held on the company premises before the season started in March last year. Udo Wagner welcomed TEAM WIPOTEC, saying in his speech, "I really enjoy working with young people." For Udo Wagner there were also other reasons for inviting the young cyclists, "Of course, I'd like to get to know you right at the beginning of the season and to show you who you're riding for." The new team jerseys were presented, individual and group photos were taken and the riders were sworn to uphold a healthy team spirit.

The Rhineland-Palatinate U19-Bundesliga-Team, which is well-known beyond the state's borders, has been cycling officially as TEAM WIPOTEC since 2016. The team's excellent form was in evidence again last season. In the overall Bundesliga ranking, it achieved a fantastic second place. The fourteen

riders celebrated a total of 52 wins and 192 medals. In addition, TEAM WIPOTEC provided the vice world champion of the 2018 season in this age group in the guise of Marius Mayrhofer.

Team manager Andreas Märkl is an important member of the team. He is more than satisfied with the performance of his team members, "Our riders delivered amazing performances and great teamwork throughout the season." In 2019 TEAM WIPOTEC will again be supported by the Olympic base for cycling, the Heinrich-Heine-Gymnasium in Kaiserslautern, an elite sports school. ▲

WIPOTEC-OCS IN MEXICO

Last year, WIPOTEC-OCS opened a new office in Mexico, the second largest economy in Latin America, with the task of creating a presence on the Mexican market and serving the customers of the fifth largest country in the Americas.

The new sales office of WIPOTEC-OCS based in Mexico City works in close cooperation with and on the site of Weber Group Latina.

All of Central America, from Panama up to the border of the United States, including the Caribbean states with Costa Rica and Cuba, is served from here. Fred Köhler, Managing Director Sales & Service and CSO of the WIPOTEC Group, managed the initial organisation and has visited the country repeatedly in recent months to provide support during these first steps.

WIPOTEC's commitment makes it possible to increase market penetration,

especially in the expanding food sector. The conditions for this are good: a positive development in domestic consumption and high foreign demand are ensuring that the country's exports are increasing. In terms of the pharmaceutical industry, Mexico is the second largest market in Latin America – with international and national market leaders such as Boehringer Ingelheim, Schering-Plough, Liomont or Laboratorios Sanfer.

The first trade fair appearance organised by WIPOTEC-OCS Latina was last year's Expo Pack in Santa Fe. It proved to be a great success and served the company and its team as a door opener in the world's most populous Spanish-speaking

country. Completion of the new showroom and an Open House Day are planned for this year. Customers and interested parties attending the event will have the opportunity to gain hands-on experience with the demonstration machines. Further expansion of the sales and service team is currently in the implementation stage. The Mexican team has set itself the goal of establishing WIPOTEC-OCS as the most important supplier of checkweighing and inspection solutions in the region. Not an easy task, but WIPOTEC-OCS Latina is confident that it can conquer the Mexican market with the help and support of the WIPOTEC Group and its technologically leading product range. ▲



WIPOTEC-OCS Latin American team
at EXPO PACK Mexico 2018

/ SOLUTIONS

PRODUCT INSPECTION

TRACK & TRACE

CEP & INTRALOGISTICS

Safe packaging

*Serialisation and aggregation solutions on the rise. **Page 20***

Quality assurance of hotel cosmetics

*100% monitoring replaces random checks. **Page 23***

AVC – Active Vibration Compensation

*Sorting centres: High-precision weighing defying vibrations. **Page 31***

/ NEWSFLASHES

/ TRADE FAIRS IN MOSCOW – AGROPRODMASH AND PHARMTECH & INGREDIENTS

Agroprodmash, a trade fair for the food industry with 802 exhibitors and around 22,000 visitors, took place from 8 to 12 October. The application possibilities of the HC-A and HC-M-WD as well as an X-ray scanner were demonstrated at the 30 m² booth of WIPOTEC-OCS.

Pharmtech & Ingredients, a trade fair for the pharmaceutical industry, took place from 20 to 23 November and recorded 7,546 visitors as well as 439 exhibitors from the field of pharmaceutical technology. Together with its Russian partner LLC OS-Technology, WIPOTEC-OCS had a 30 m² booth and was the only exhibitor to present a cryptocode which was printed in good quality using two print heads. Another highlight was the REA Vericube for verifying printed codes. A large number of visitors and also other exhibitors checked the quality of their codes.

WIPOTEC would like to take this opportunity to thank all those involved for their successful trade fair appearances in Russia and for the excellent cooperation. ▲



/ CATEGORIES OF COUNTERFEITING

The World Health Organisation (WHO) categorises the falsification of drugs in three product groups:

- Products without active ingredients(e)
- Products with incorrect (too high or too low) quantities of active ingredients
- Products with falsified/wrong ingredients

Falsified drugs can also be dangerous for patients due to toxic ingredients or due to overdoses of the correct active ingredients.

The fact that falsified drugs are often manufactured under unhygienic conditions is yet another problem. As a result, they may be contaminated with impurities or with bacteria.¹ ▲

¹ <http://www.who.int/en/news-room/fact-sheets/detail/substandard-and-falsified-medical-products>

/ DJAZAGRO – TRADE FAIR FOR THE FOOD INDUSTRY

DJAZAGRO, an annual trade fair for the agricultural and food industry, takes place in Algiers (Algeria). In February 2019, the trade fair provided a presentation platform for more than 700 exhibitors. 22,000 industry experts took advantage of the offering at DJAZAGRO to find out about new products and trends.

WIPOTEC-OCS, supported by a partner company, used DJAZAGRO as a platform for presenting the company's checkweigher technology. The industry experts were especially interested in weighing accuracy and belt speeds, drive concepts, conveyor systems and sorting devices. But it wasn't just all about theory in Algiers: WIPOTEC-OCS presented the HC-M, a dynamic checkweigher for the mid-performance range, at its booth. Definitely a case here of: Try before you buy. ▲



*The in-house
machining
facility
produces
over 9,300
different
components
in 1 year.*

/ POST-EXPO – LEADING TRADE FAIR FOR THE POSTAL, PARCEL AND EXPRESS SERVICE INDUSTRY

In October 2018, the international postal and parcel world met at POST-EXPO in Hamburg. This is a trade fair that covers far more than the name might suggest: e-commerce and digital solutions, automation, express couriers, logistics service providers, cross-border delivery services. WIPOTEC-OCS presented the world's fastest NTEP-certified double scales at its booth. WIPOTEC's groundbreaking AVC technology (Active Vibration Compensation), which was developed using active compensation to eliminate the influence of external sources of disturbance during dynamic weighing, was also on show in Hamburg. Combined with the special design principle of the double scales, it enables the achievement of higher accuracy, shorter parcel gaps and consequently higher throughputs when weighing in parcel sorting plants. ▲

/ THE WORLD'S FASTEST CERTIFIED DOUBLE SCALES



Further information on HC-FL:
www.wipotec-ocs.com/en/catchweighers/hc-fl

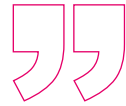
The HC-FL parcel scales, designed by WIPOTEC-OCS as double scales, have an NTEP (National Type Evaluation Program) type examination certificate. This confirms that they meet the legal requirements of NIST² Handbook 44 for test standards in dynamic weighing operation up to a maximum transport speed of 3.4 m/s. The HC-FL may therefore be used as an automatic weighing system legal for trade applications in the USA. The technology of the HC-FL uses two scales arranged physically in series and generates a third set of virtual overall scales, the platform length of which is the sum of the two physical scales. This means that three different weighing belt lengths are available at the same time, making it possible to decide which of the three scales the next package will be weighed on. This significantly reduces the required package distance (minimum gap) and increases the throughput performance for mixed mail by up to 60%. The maximum load of the HC-FL is 55 kg at the speed referred to above. ▲

² National Institute of Standards and Technology – U.S. Department of Commerce

SAFE PACKAGING

Findings from the pharmaceutical industry





The serialisation of pharmaceuticals is a requirement for exporting our products. Our export share is currently 45% and growing. That's why we need a reliable solution.

Mohamed Ali Akkari

New Projects Director at UNIMED

The pharmaceutical industry was one of the first industries to recognise the efficiency of serialisation and Track & Trace technology for protecting the product and supply chain against counterfeiting and grey market goods. With the Traceable Quality System (TQS) product line, WIPOTEC-OCS has successfully supported pharmaceutical companies with their projects. The high-tech machine builder is now working on adapting its high-performance serialisation solutions to the requirements of sectors outside the pharmaceutical industry.

Measures to counteract product counterfeiting in the form of product serialisation laws triggered a major transformation in the healthcare industry and made regulatory compliance a top priority in 2018. The World Health Organisation (WHO) estimates the proportion of inferior or falsified medical products in low and middle-income countries at ten percent. With the entry into force of the EU-FMD and the US DSCSA regulations at the turn of the year, pharmaceutical manufacturers worldwide are speeding up their compliance efforts. As healthcare markets continue to globalise, the European and US regulations are also affecting companies

that do not require serialisation at national level. WIPOTEC-OCS is registering high demand worldwide for serialisation and aggregation solutions and reported implementing more than 2,000 Track & Trace projects in the pharmaceutical industry up to the end of 2018.

Flexible and scalable solutions

Some countries are taking further measures to combat counterfeiting. They are demanding comprehensive product traceability at national level, which is made possible by product aggregation. The global regulatory environment shows that the transformation of the healthcare market will continue worldwide. For production management, this means that packaging lines have to be flexible enough to support the various serialisation and coding specifications of different markets.

Serialisation as an anti-counterfeiting measure in other industries

Unfortunately, the problem of product counterfeiting is not confined to the healthcare industry. The increasing globalisation of the economy and inadequate control of the trade in counterfeit products is sanctioned in many countries with very low fines. All this encourages the global increase in counterfeit products.

Product piracy, however, is not only a problem for brand owners whose products are affected. In the cosmetics, food and agrochemical industries, this poses a risk to health and the environment, as the counterfeit products are not subject to the safety regulations of the original products.



Product safety due to serialisation and tamper-proof labelling

In the agrochemical sector alone, Europol estimates the share of counterfeit and unauthorised pesticides at 14% of the EU market. In 2018, the organisation seized around 360 tons of illegal pesticides and withdrew them from the market. According to studies by the European Union's Intellectual Property Office, some 1.3 billion euros is lost throughout the EU due to counterfeit agrochemicals. These figures show that even a considerable initial investment in more anti-counterfeiting security will result in the long term in a high return on investment, regulatory compliance and competitive advantages.

Of all the solutions available on the market, serialisation is proving to be one of the most effective. The technology provides manufacturers, wholesalers and retailers with a systematic approach to detecting counterfeit products and to controlling the illegal trade. The pharmaceutical sector is a good example of how serialisation and Track & Trace technology can ensure product integrity and transparency in supply chains. ▲



The cooperation with WIPOTEC-OCS is an important strategic decision given the maximum flexibility we are striving for.

Dr. Marco Klingele
Head of Administration and
Track & Trace Program Lead at Losan Pharma



QUALITY ASSURANCE OF HOTEL COSMETICS

Bottles, jars and tubes: 100% inline product control with checkweighers from WIPOTEC-OCS for the German pioneer of the hotel cosmetics industry.

As a leading manufacturer of hotel cosmetics, ADA Cosmetics International GmbH in Kehl offers its customers innovative and effective complete solutions. Seamlessly monitored manufacturing processes of bottles, jars and tubes ensure the premium quality of the products made in Kehl.

100% monitoring replaces random checks

These days, ADA Cosmetics uses a checkweigher downstream of the production process to check the correct filling quantity of bottles, jars and tubes. In the past, random samples were taken to check the filling rather than any precise product control. This one-hundred-percent monitoring prevents any complaints about tubes and guarantees a constant process flow. The special feature of this type of weighing at ADA Cosmetics is that the checkweighers have also been integrated in the product transport systems themselves (and vice versa). In terms of control, mechanics and inline safety, the HC-A model scales installed meet the highest standards and for this reason are used in demanding high-speed production and packaging lines worldwide.

The ADA Cosmetics products pass through individual production stages in an optimised transport system consisting of several transport pucks, each holding one article. The transport system consists of up to 500 circulating pucks which, once they have passed through the line and the articles have been removed, return to the beginning of the line to receive new products. From a manufacturing point of view, the advantage of this is that product transport can take place at maximum speed despite the limited stability of the individual products. As a result, it is possible to produce up to 90,000 articles per shift and to check them completely on an article-by-article basis.

Optimised for dynamic weighing

In addition to better product control, integration of the scales into the transport systems of the production lines has a number of further advantages: There are no format parts in the checkweighers and their feed systems, as the products do not have to be guided, held or stabilised during transport. As a result, you won't find any wear parts in them either, with the exception of the conveyor belts which transport the pucks. The products themselves do not come into contact with the checkweigher but remain in their transport pucks. There are various solutions to ensure the product gap required for a correct weighing process. In some product lines, upstream systems already position the products at the correct distance. In other cases, there is a buffer area on the inlet side and a star wheel ensures the correct gap.



It is possible to produce up to 90,000 articles per shift and to check them completely on an article-by-article basis.

Nicki Eberle

Head of Engineering at ADA Cosmetics

Gross/tare weighing for precise weighing results

As the products have to be weighed in their transport pucks, the individual pucks report their individual net weight to the checkweigher via an RFID chip shortly before transferring to the weighing belt. The checkweigher can then calculate the actual product weight from the gross weight currently determined, consisting of product and puck weight. These values have to be acquired again after changing the pucks due to a product change. This takes place by having all new pucks pass through the weighing system to transmit their empty weight to the checkweigher via an RFID chip

Weighing at top speed

The inline checkweighers at ADA Cosmetics have to be able to determine their weighing results in a very short time due to the high throughputs. For this reason, as in all WIPOTEC-OCS checkweighers, only Weigh Cells based on electro-magnetic force restoration are used. The key benefit of such a Weigh Cell is its extremely short settling time. Compared to the weighing principle with strain gauges, this type of Weigh Cell provides very precise weights significantly faster. This has huge advantages, particularly in the field of dynamic high-speed weighing applications which are the norm in pharmaceutical and cosmetic production. These Weigh Cells have no wear parts and are therefore absolutely maintenance- and wear-free.



HC-A checkweigher with one-piece, RFID-equipped pucks for product transport.

Nicki Eberle, Head of Engineering at ADA Cosmetics International GmbH and Matthias Hofer, Area Sales Manager WIPOTEC-OCS GmbH



Reliable ejection of articles with incorrect weight

Articles with incorrect weight are reliably ejected via product-specific sorting devices even at high belt speeds. They eject underfilled tubes or jars, as well as overfilled tubes which are at risk of not being closed properly. It is possible to make product changes to the checkweigher in a very short time by simply entering the article number. The changeover times are minimal because the outer geometry, even after the format change, always remains the same for the scales due to using pucks with identical external dimensions. The quickly effected changeovers favour both small batch production and mass production.

Online monitoring of current production

As Head of Engineering, Nicki Eberle manages all the technical projects at ADA Cosmetics. With the help of the Comscale management system from WIPOTEC-OCS, Eberle has networked all checkweighers with each other. Comscale enables him to monitor production from the checkweigher's point of view; the software allows bi-directional access to all connected systems, regardless of where they are located, across all sites and in real time. They transmit the information which accrues during the inline weight check. The data is collected in real time, reports and statistics are generated, and analyses are created. In this way, the weighing protocols required by the Weights and Measures Office, which would otherwise have to be generated by each checkweigher, can be generated and archived centrally by Eberle. It is also possible to create cumulative statistics if several lines at ADA Cosmetics produce the same product. The Comscale inspection data management system offers online monitoring with alarm level management for all product deviations which can be detected by checkweighers. Configurable reports on production figures, waste, machine utilisation and quality criteria are also part of the online monitoring.▲

/ OUR CUSTOMER ADA COSMETICS INTERNATIONAL GMBH

ADA Cosmetics International GmbH is a leading global reference for hotel cosmetics. To ensure the quality, effectiveness, storage life and compatibility of its products, ADA controls the entire production process, from the selection of raw materials and packaging to the finished cosmetic product, according to established test schedules.

The company's history began in 1979 with a single bar of soap that was sold in an elegant black soap box embossed with a gold leaf.

Employees: 280 people in Kehl and more than 600 worldwide

Location: Kehl

Products: Modern hotel cosmetics

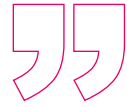
MORE INFORMATION:

www.ada-international.com

TRACK & TRACE PHARMA

How international contract manufacturers
effectively protect supply chains





If aggregation becomes mandatory in countries in the future, we would not need to change any of our existing lines because of it.

Bartłomiej Sedek

Manager Engineering at Acino Pharma AG

Global compliance regulations, such as the serialisation obligation within the EU for prescription drugs, force pharmaceutical manufacturers to ensure clear identification of counterfeiting and product diversion.

The Traceable Quality System (TQS) from WIPOTEC-OCS offers customers a Track & Trace solution, specifically adapted to their production conditions. A complete Track & Trace system facilitates counterfeit-proof identification features as well as end-to-end traceability of the products, thus creating a basis of trust on the part of consumers.

At WIPOTEC-OCS we support our pharmaceutical customers with the correct advice regarding country-specific regulations, and an individual solution which is tailored to the customer's requirements and corresponding implementation of it into production lines. With our TQS Fast Track program, we help pharmaceutical companies who are looking for the fastest possible processing of their Track & Trace project. These are automated serialisation and aggregation solutions which are available within six weeks* – record times in the market! Our customers appreciate this fast service and above all our reliable products.



TQS-HC-A at Acino in Aesch, Switzerland: Serialisation, weight inspection and tamper evident functionality on the smallest footprint

Acino International AG

Acino International AG headquartered in Zurich is a Swiss-based international pharmaceutical company. A leader in the production of complex dosage forms, as a contract manufacturer the company offers its customers a complete service for their manufacturing needs.

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* Period of six weeks commences with order acceptance and ends before FAT (Factory Acceptance Test) that is excluded from the six weeks



Christos Anastasi
Project Manager for Serialisation
at Medochemie Ltd.

Having installed the WIPOTEC-OCS solutions, Acino can offer its customers both serialisation and aggregation at several levels of shipping units. These transparent logistics processes make it possible for importers to capture the content of deliveries much faster.

TQS offers unlimited drug safety thanks to serialisation and aggregation. Irrespective of whether the aggregation is semi-automated or fully-automated; modules can be added in each case, according to production requirements, to provide the desired range of functions.

Medochemie Ltd.

Medochemie, an international pharmaceutical and contract manufacturing company, has actively expanded into promising markets around the world from its base in Europe via the Middle East and Africa to the Far East, Southeast Asia and America. The company produces a wide range of pharmaceuticals in full compliance with European directives. By serialising prescription drugs for the global market, Medochemie meets the legal requirements and contributes to patient safety, while also protecting against the counterfeiting of medicines.

For Medochemie, quality, reliability and the most compact design were decisive factors when choosing a system. TQS-HC-A serialisation solutions with checkweigher functionality are in use at Medochemie. The TQS-HC-A from WIPOTEC-OCS offers serialisation, tamper-proof labelling and weight inspection on a footprint only 1,800 millimetres long.

“We decided on this route as the TQS-HC-A has an integrated checkweigher. We parted company with our old checkweighers and have implemented the TQS-HC-A machines instead. This has enabled us to keep the length of the whole line as short as possible,” says Christos Anastasi, Project Manager for Serialisation at Medochemie Ltd.

UNIMED Laboratories

UNIMED Laboratories is a leading Tunisian pharmaceutical manufacturer. The company manufactures more than 200 products under its own brand and exports to Europe, the Middle East, Africa and Asia. UNIMED is also planning to expand its activities to the US market. As a contract manufacturer and developer, the company provides a number of industry-leading pharmaceutical manufacturers with a comprehensive range of services and



Serialisation of pharmaceuticals

“The obvious advantage of the TQS machines is that they are suitable for all markets.”

Mohamed Ali Akkari
New Projects Director at UNIMED

supports them in opening up global markets. In UNIMED’s case, there is no need to serialise every product. The pharmaceuticals manufactured for the domestic and African market require a different coding with specific information, such as batch number and product price. For production, this means that a packaging line must be flexible enough to serve different markets.

“For the majority of markets in Africa and the Middle East, we need to place labels on the top of the folding box. However, we also have to produce for the Tunisian internal market on the same machine. The obvious advantage of the TQS machines is that they are suitable for all markets,” says Ali Akkari, New Projects Director at UNIMED.

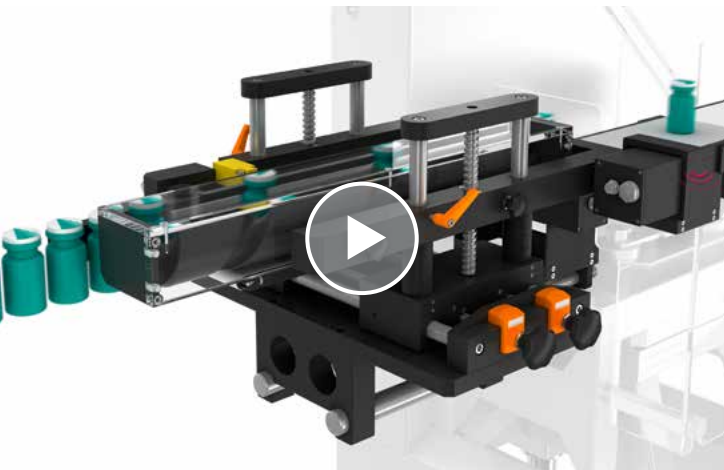


Mohamed Ali Akkari (left), New Projects Director and Makrem Zouaoui, Serialisation Project Manager at UNIMED

The TQS serialisation and aggregation solutions provide UNIMED with flexibility when serialising and coding for different requirements and regions with just a single machine. The company can continue its expansion course with the reliable support of Track & Trace solutions from WIPOTEC-OCS. ▲

CHECKWEIGHER MODULARITY

The modularity of WIPOTEC-OCS checkweighers is especially evident in product handling. The many configuration options for product transfer, product guidance and ejection make it possible to use these systems for a wide range of products.



The dynamic weighing of products in high-speed production lines is the epitome of technical achievement but also a challenge for checkweighers. In this case, modularity means: products of different sizes, as well as weight, shape and stability, must be reliably transferred from upstream systems, guided across the weighing belt by the shortest route and with the optimum gap, and subsequently subjected to a sorting or ejection process. Systems with highly functional modularity have a clear advantage here; WIPOTEC-OCS checkweighers achieve this by standardising the components responsible for product guidance and product handling as far as possible.

Product transfer

WIPOTEC-OCS checkweighers can be equipped with knife-edge conveyor belts to ensure particularly reliable product transfer between the conveyor belts. Their advantage is that the conveyor belts are very close together and the transfer area can be kept especially small. Small, light products are transferred in the correct position even at high speeds.

Defined product gaps

Checkweighers require accurately defined product gaps for precise weighing operations and reliable ejection or sorting processes. In cases where products are fed in with gaps between them which are undefined or too small, the WIPOTEC-OCS checkweighers use additional conveyor belts to create the necessary gaps. Each additional belt increases the transport

speed accordingly. Until finally the necessary gap is created. A large number of available, standardised conveyor belts permits product separation over the shortest possible route, synonymous with very compact systems.

Product transport through the checkweigher

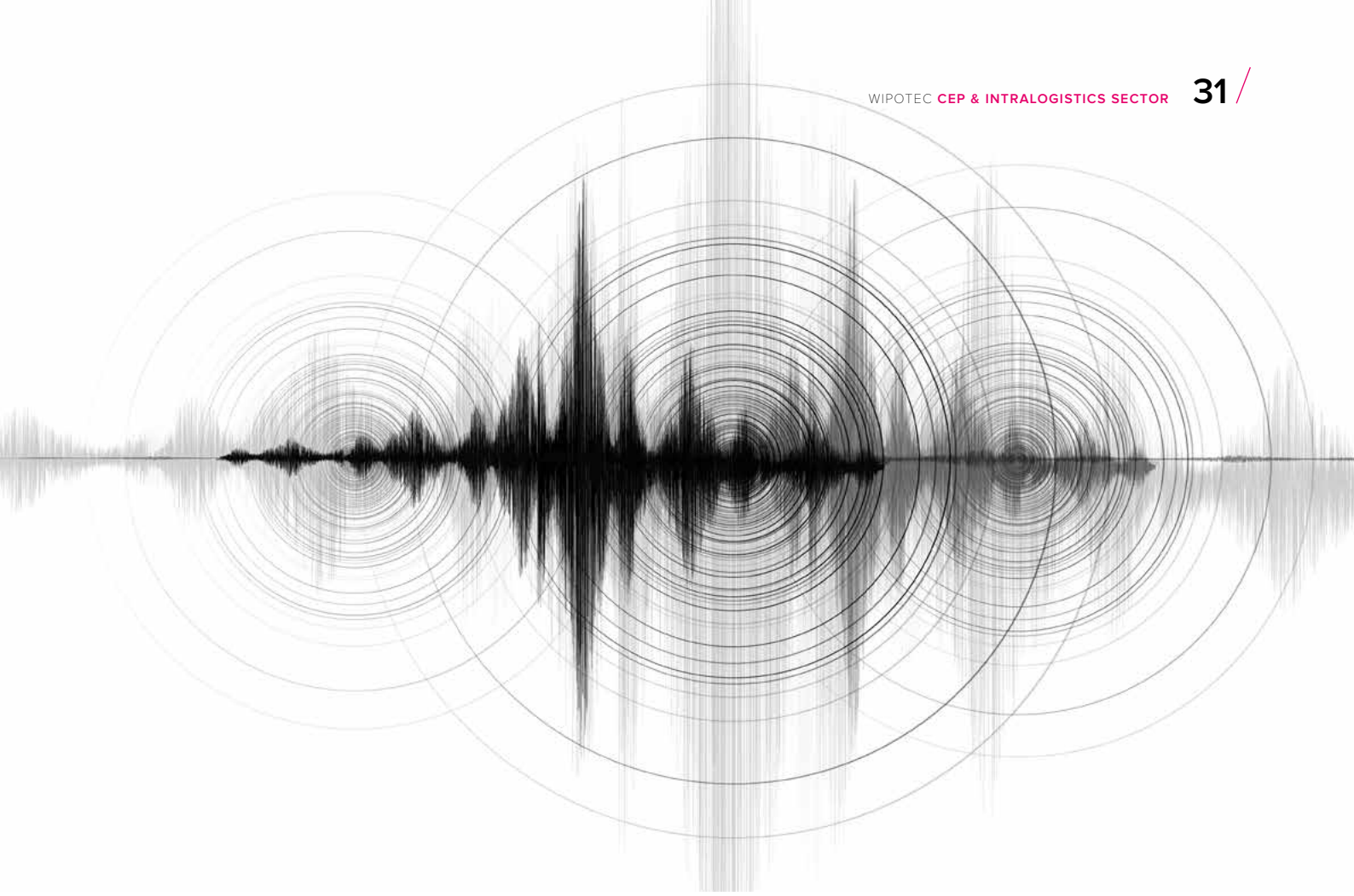
The modular components of product guidance also include guide rails which optimise the reliable transport of unstable products such as tubes. In the case of folding boxes, configurable top and bottom belt guides with an infinitely adjustable and synchronised top-bottom conveyor ensure stable transfer.

Ejection and sorting

WIPOTEC-OCS checkweighers can be equipped with different ejection and sorting systems. For light to medium-weight products, these are blow nozzles which eject the product from the production process with a blast of air even at high throughput rates. A motorised paddle ejector takes over this task in very fast production lines or production processes where compressed air is not provided. Pneumatically operated sorting pushers are used for medium to heavy-weight products. Tilting belts can eject bad products on single and multi-lane production lines. Sorting deflectors are used for products that must not fall over during the sorting or ejection process. They divert bad products onto a separate belt. ▲

QR code for
the full video:





AVC – ACTIVE VIBRATION COMPENSATION

AVC makes high-precision weighing results in sorting centres possible.

Courier, express and parcel services, or CEP services for short, transport consignments in particular with weights up to approx. 60 kg as well as letters, documents, parcels and small individually packaged goods. These restrictions on dimensions and weight enable standardisation during processing. Handling and sorting of the goods can be intelligently automated. The rise in e-commerce (Internet trade) is also contributing to the strong growth in CEP services.

For CEP and intralogistics companies, this requires corresponding expansion of their capacities. The objectives are significantly higher consignment handling speeds in the distribution centres and, consequently, shorter sorting times. It also means higher speeds for sorting systems and scales. This automation also includes the dynamic weighing technology which forms the crucial basis for accurately billing transport services provided in the CEP sector.

Challenge: vibrations

The use of dynamic weighing technology in sorting centres frequently poses a special challenge since vibrations are a major factor here. Vibrations are present in all parcel freight centres as the sorting technology for sortable goods has now been changed over almost everywhere from semi-automatic to fully-automatic systems. The components of weighing technology, frequently used in weighing systems such as DWS systems (dimensioning, weighing, scanning), consist of a combination of the weighing belt for transporting the consignments and the actual Weigh Cell. These weighing systems are often located close to sorters which, due to their moving masses, transfer vibrations to the platforms or the transport systems themselves. Sorters and the transport systems themselves generate high amplitude oscillations. These low-frequency oscillations with a high signal level can impede or influence dynamic weight measurements.

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/ IMPROVEMENTS DUE TO AVC

All systems equipped with AVC from WIPOTEC-OCS have Weigh Cells based on electro-magnetic force restoration which deliver very precise weight values considerably faster.

AVC:

- Significantly increases the accuracy when affected by floor or platform vibrations
- Achieves damping of the impact on the measuring result of up to 20 dB (factor of 10)
- Compensates floor vibrations, particularly below 10 Hz
- Can be fitted to all scales of the EC-M or HC series

A further complication is that the majority of sorting operations take place on steel platforms at a higher level, since the floor space is used for internal freight traffic which relies on clear routes.

AVC – vibration compensation for platforms

This is where AVC (Active Vibration Compensation) promises a remedy. This exclusive vibration compensation technology from WIPOTEC uses intelligent algorithms to ensure the most accurate weighing results, even under the influence of vibrations, so that it is possible to achieve the weighing accuracy demanded by customers without sacrificing speed.

Installation of weighing systems

For reasons of space and cost, sorting centres often feature raised work platforms in order to make better use of the enclosed space. These platforms vibrate during operation. Measuring results in parcel freight centres clearly demonstrate the advantage of decoupled platforms. However, considerable effort is required to install weighing systems so that they are not affected by the vibrations caused by the sorters. The reason for this are the special challenges that emerge in the design and planning of distribution centres due to the additional vertical beams of decoupled platforms. In this case, the scales are frequently mounted on mezzanine structures (mezzanine floors) that are designed as steel platforms supported on beams. These beams take up additional valuable space, sometimes affect safety-related measures (such as escape and driving routes) and require the adjustment or repositioning of existing systems.



” *AVC delivers the most accurate weighing results, even under the influence of floor vibrations.*

As dynamic weighing systems are significantly affected by spurious oscillations, there are two ways to minimise their effects. On the one hand, attempts are made to minimise the vibrations of the supporting structure, while limiting the remaining effect of the residual vibrations on the other hand. The first approach includes the mechanical layout, the second the use of vibration compensation technologies such as AVC from WIPOTEC.

AVC filters environment-induced interferences out of the measuring results without any loss of speed and enables the weighing technology to be used even in sorting systems or freight centres where catchweighers (i. e. industrial scales) have to be set up on vibrating floors. The AVC technology is particularly effective for vibrations below 10 Hz, as it can reduce the impact on the measuring result to a tenth, equivalent to an attenuation of 20 dB. AVC is an exclusive technology from WIPOTEC.

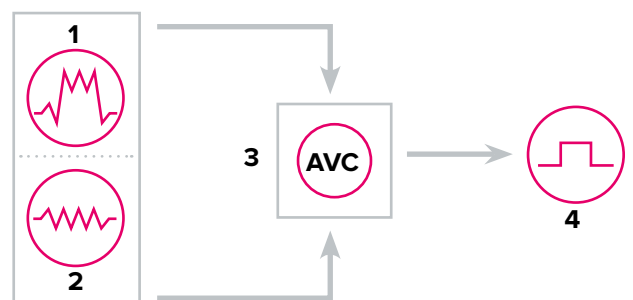
How AVC works

AVC is a technology developed for WIPOTEC Weigh Cells which enables the most accurate measuring results even in difficult environments without compromising on speed. Two Weigh Cells are installed inside one housing. One Weigh Cell measures the oscillations due to the vibrations, while the other measures the oscillations including the load to be weighed.

The disruptive influencing variables can be calculated by comparing both measuring curves. The measured result is close to that which would be obtained if no vibrations were actually present.

Results to be achieved with AVC

Active vibration compensation systems (AVC) from WIPOTEC can eliminate or at least severely limit the negative impact of floor vibrations on weighing results. The aim is to achieve the calibration values specified for scales even outside decoupled platforms. In particular, AVC can ensure that correct weight measurements can be performed even at high transport speeds and even when the consignments stay on the weighing belt for a correspondingly short time. AVC can optionally be provided as a very effective vibration compensation system particularly for systems in sorting and distribution centres, if this should be necessary due to the environmental conditions. >>



- 1 Measuring signal with interference signal superimposition
- 2 Interference signal
- 3 Signal processing
- 4 Resulting useful signal without interference

Signal diagram with AVC

A comparison of curves with and without AVC shows that with AVC activated the fluctuations due to vibrations are very much smaller and therefore the scales can measure very much more accurately.

AVC cannot subsequently boost the efficiency of an unsuitable steel structure in all cases, since the use of AVC requires compliance with acceleration limits imposed by the mechanical design. These acceleration limits depend on the conveying speed, the calibration value and the frequencies and amplitudes of the disturbance variables. The influence of the disturbance source (products, sorters, motors with high imbalance) also has to be taken into account.

Economic benefits due to AVC

The use of calibrated weighing systems is required by law. In combination with AVC, it leads to substantially more accurate weighing results and therefore prevents incorrect billing of transport fees. Many companies in the CEP sector are increasing their profit margins by using automated weighing technology that is equipped with active vibration compensation systems.

The potential profit increase for the carrier results from the group of goods that would fall into the next more expensive category due to more accurate weight determination. Additional revenues are the result of the price difference between the categories due to using more accurate scales. Obtaining a smaller calibration value enables billing to start at a lower level. For MID applications, 5e is the lowest weight value that can be billed. This means that with a calibration value of 50 grams, parcels of 250 grams or more can be billed, with a calibration value of 20 grams, parcels of 100 grams or more can be billed.

More broadly defined than just recording weights, this term is known as revenue recovery, that is the ability to make additional demands for logistics services actually provided. In the parcel sector, these additional revenues can amount to several thousand euros a day.

EMFR Weigh Cells

All systems equipped with active vibration compensation technology have Weigh Cells based on electro-magnetic force restoration (EMFR). The key benefit of a WIPOTEC Weigh Cell with electro-magnetic force restoration is its extremely short settling time. Compared to the weighing principle with strain gauges, this type of Weigh Cell provides very precise weights significantly faster which allows it to be used at high transport speeds. This type of Weigh Cell also has no wear parts and thus operates absolutely maintenance- and wear-free.

The EMFR-based solutions from WIPOTEC therefore offer decisive benefits, especially in the CEP sector. Here in particular, the weighing technology installed must be so robust, reliable and fast that on the one hand it can keep up with the high system speeds, and on the other hand it has sufficient stability to enable it to cope in the shipping and logistics environment.

References include well-known players, such as DHL, FedEx, USPS and UPS; here there are installations of impressive size, including in international freight centres. Added to these are a large number of installations for international integrators who have also secured this WIPOTEC technology for themselves. The active vibration compensation technology AVC is available exclusively from WIPOTEC. ▲



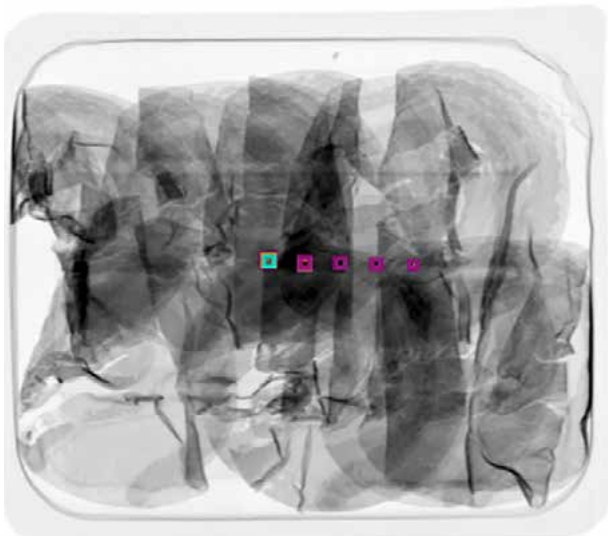
HC-FL catchweigher from WIPOTEC-OCS

GUARANTEED RELIABLE

Even without a service contract: WIPOTEC-OCS gives a seven-year warranty on the new generation of VioX cameras.

Product inspection is an important part of food safety. According to statutory Regulation (EC) No 852/2004, food producers must carry out a risk analysis and determine critical control points in their production process. The controls in question include the detection of foreign bodies (e.g. ferrous, non-ferrous metals, stainless steel, glass, ceramics, stones) and inspection of the packaging.

Although metal detectors can be used to detect metals in food, only X-ray scanners are able to identify other types of foreign bodies and additionally check the product quality. Examples of this are detecting missing chocolates, automatically assessing the ripeness of cheese wheels or checking the filling level of yoghurt pots.



Test passed: five foreign bodies detected in a thermoform package of sliced meat

The design of X-ray scanners

All X-ray systems are basically similar in design. There are always two main components: an X-ray source and an X-ray detector. The detector generates X-ray images which are then analysed by a computer system. Depending on the product form, the two main components are located above and below the conveyor belt (top-down scanner) or at the side of the conveyor belt (side-view scanner).

HD-TDI vs. diode technology

At WIPOTEC-OCS, all top-down models of the SC series are equipped with high-resolution HD-TDI camera technology. But what is it that makes these camera systems so special?

A basic resolution of 0.1 mm is achieved with the new generation of VioX cameras. The new camera technology means that the detection sensitivity increases and therefore smaller foreign bodies can be detected. Contaminated products are ejected from the product flow.

Traditional detectors, based on diode technology, detect each pixel only once. With the HD-TDI camera systems from WIPOTEC-OCS, this takes place 128 times; the X-ray image is then generated from the result.

Another significant difference between diode line detectors and camera detectors with HD-TDI technology is found in their design. In the industrial diode line detectors, the electronic components are permanently exposed to radiation which leads to wear.

Thanks to the intelligent design of the HD-TDI camera systems, the electronics are shielded in such a way that they do not come into contact with the radiation. For the current generation of VioX cameras, WIPOTEC-OCS therefore gives a seven-year warranty – irrespective of whether any service or maintenance contracts are concluded and irrespective of the number of operating hours. ▲

WIPOTEC ON EXPANSION COURSE IN CHINA

The Ministry of Finance and the Ministry of Commerce are initiating steps to dismantle trade barriers for international pharmaceutical and medical technology companies.



Volker Ditscher, Business Manager at WIPOTEC-OCS, at the international Pharma Supply Chain Summit in Shanghai

Following suspension of the Track & Trace regulations in February 2016, the Chinese Food and Drug Administration (CFDA) announced its intention to revise the provisions for serialisation and traceability and to bring them into line with international standards. The joint announcement of the Chinese Ministry of Finance and the Ministry of Commerce, which was published in May 2018, mentions GS1 regulations and the goal of developing an intelligent supply chain.

Together with GS1, WIPOTEC-OCS supports companies in the healthcare industry with the transition from national to international standards. Volker Ditscher, Business Manager at WIPOTEC-OCS, recently spoke at the first international Pharma Supply Chain Summit in Shanghai about an international model for the serialisation and traceability of drugs. More than 500 stakeholders from the pharmaceutical industry, 3PL companies as well as healthcare and research establishments attended this event. Among other things, WIPOTEC-OCS maintains a showroom in the Pilot Free Trade Zone (PFTZ) in Shanghai for demonstration and training purposes, focusing on harmonisation of the Chinese Serialisation Guidelines.

Volker Ditscher says, “We maintain very close cooperation globally with international organisations, local associations and health authorities; on the one hand to advise them with our expertise and on the other hand to learn about new legislation on the serialisation of pharmaceuticals or any adaptations to it. In this way, companies worldwide can rest assured that their investments in our systems have a future and will help them in the long term to achieve the success they desire.” The planned harmonisation of the supply chain in China is a positive development for the national and international players in the healthcare sector and an important step towards dismantling trade barriers. ▲



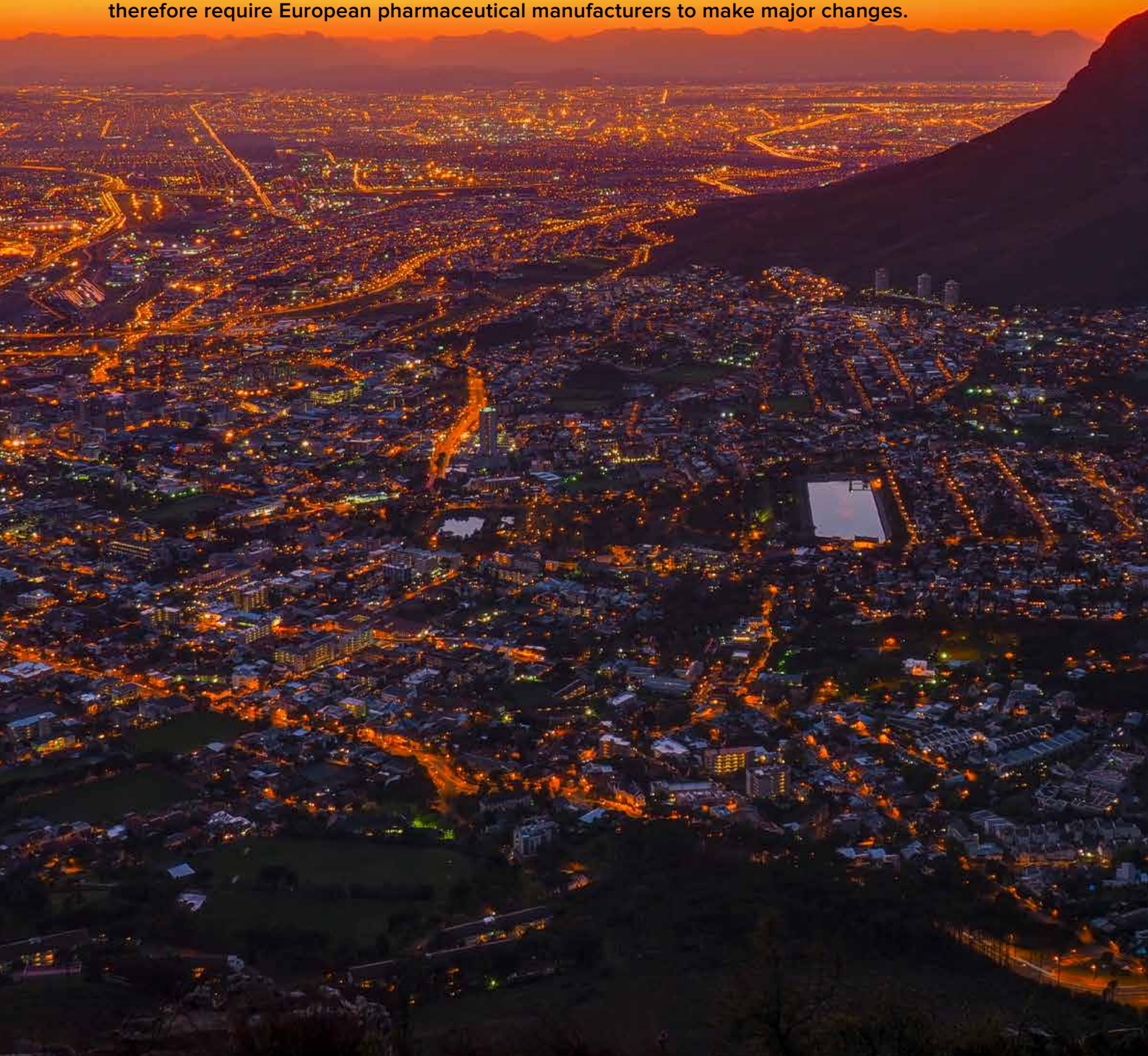
More than 500 participants discussed solutions for harmonising the Track & Trace systems



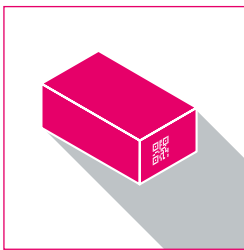
Demonstration of serialisation solutions which meet international standards

/SERIALISATION: HOW SOUTH AFRICA IS GOING ABOUT IT

Exports of pharmaceuticals from the EU to South Africa amount to more than one billion euros a year. The latest coding and serialisation guidelines in South Africa will therefore require European pharmaceutical manufacturers to make major changes.

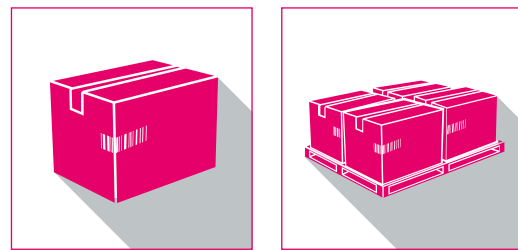


SECONDARY PACKAGING



(01) GTIN	JUN 30 2020
(10) BATCH /LOT	JUN 30 2020
(17) EXPIRATION DATE	JUN 30 2020
(21) SERIAL NUMBER	JUN 30 2022

TERTIARY PACKAGING



(01) GTIN	DEC 30 2018
(10) BATCH /LOT	DEC 30 2018
(17) EXPIRATION DATE	DEC 30 2018
(21) SERIAL NUMBER	JUN 30 2022

Monitoring the global pharmaceutical Track & Trace regulations is crucial to accurate production planning and forecasting. Pharmaceutical companies which export large quantities of their production output regard compliance with statutory regulations as an important requirement for successful business in foreign markets. Companies which supply their products to South Africa will have to plan for a reorganisation of their packaging process to meet the upcoming South African requirements. They are specified in Government Notice No. 988¹ of the National Department of Health.

Although this requirement is not being discussed as actively as the EU Directive on Falsified Medicines and the USA's DCSA Regulations, it is certainly of interest to companies which export to South Africa. According to Eurostat², the statistical office of the European Union, the value of pharmaceuticals exported from the EU to South Africa in 2017 was 1.185 billion euros. The Government Notice describes the implementation of a 14-character GTIN (Global Trade Item Number) in a GS1 DataMatrix code, which had replaced the EAN-13 barcode on tertiary packaging (i.e. shipping cases or similar) by the end of 2018. In addition to the GTIN, the DataMatrix code must also contain the batch or lot number and the expiration date.

Beyond this, South Africa will join the global fight against medicine counterfeiting by introducing the serialisation of secondary and tertiary packaging by 2022. The directive will be implemented gradually to give pharmaceutical companies sufficient time for adequate preparation. Together with its South African partner USS Pactech, WIPOTEC-OCS is supporting the country's healthcare sector during this transition and helping pharmaceutical manufacturers to implement the global serialisation regulations as quickly as possible. ▲



¹ South African Department of Health (2017). Request for information: National Department of Health phased implementation of GTIN-14 DataMatrix Barcodes (No. 988). Government Gazette (Vol. 627, No. 41114)

² European Commission, Directorate-General for Trade (2018). European Union, Trade in goods with South Africa

WEIGHING TECHNOLOGY

Weighing kits for new markets

*Weighing technology for machine constructors. **Page 42***

Weighing lightweight products

*Multi-lane weighing systems for high cycle speeds. **Page 44***

NEWSFLASHES

/ MULTI-LANE APPLICATIONS FOR CAPSULES AND STICK PACKS

With its compact design, the new WIPOTEC Weigh Cell SL-E is particularly suitable for installation in multi-lane weighing systems with a 29 mm lane centre-to-centre distance. This installation situation is found, for example, in production machines for coffee and tea capsules. Further areas of application are in-process control as well as filling and packaging machines. The SL-E can be raised in time with the machine cycle to ensure that the capsules are discharged as necessary from the transport plate for weighing. System-induced active self-damping enables the shortest possible measuring times while maintaining high resolution. The SL-E has a very slim design. The electronics are already integrated in its aluminium housing and no other external components are necessary. ▲



/ MULTI-LANE WEIGHING SOLUTIONS FOR SYRINGES AND VIALS

The new EMFR Weigh Cells from WIPOTEC Weighing Technology used in multi-lane weighing solutions stand for high cycle rates and guarantee maximum output. They are particularly suitable for small packaging formats, for example pharmaceutical products such as injection vials, capsules or syringes. The slim AVC (Active Vibration Compensation) compatible Weigh Cells can be loaded with push-over technology, a pick and place system or walking beam. The load output from the front offers machine builders design advantages and new options for action. The smallest possible lane spacings from 25 millimetres can be achieved with the new Weigh Cells. ▲

/ NEW COMPACT SENSOR

The SX-M-FS Weigh Cell has a particularly slim design. In multi-lane weighing systems, and particularly suited to filling and packaging machines as well as in-process control applications, this compact sensor enables a lane centre-to-centre distance of only 25 millimetres. The load application is designed in such a way that a customer's secondary protective enclosure can very easily be adapted across all Weigh Cells. ▲

WEIGHING KITS FOR NEW MARKETS

US and Canadian machine builders rely on WIPOTEC Weighing Technology.

Around 75% of Canadian and US customers for Weigh Cells are original equipment manufacturers (OEMs). These OEMs produce filling machines for their end customers. The North American WIPOTEC Weighing Technology team operates in close partnership with its OEM customers to achieve optimum application performance in the specific machine configuration with the best integration of weighing technology.

The remaining 25% of North American customers are system integrators. They typically use weighing kits, which are integrated into checkweighers.

“Our machine builder customers benefit from top-class pre-sales application support and a fast, personal after-sales service. The broad portfolio of integration solutions covers the most diverse application requirements. Our Weigh Cells offer a large number of communication options, which means that they can be integrated into the customer’s control systems,” says Jack Smith, Sales Director of North American WIPOTEC Weighing Technology. Together with Scott Gibson, he works closely with North American machine builder customers. Jack and Scott’s goal is to maximum their customer’s line efficiency by integrating market leading Weigh Cells.

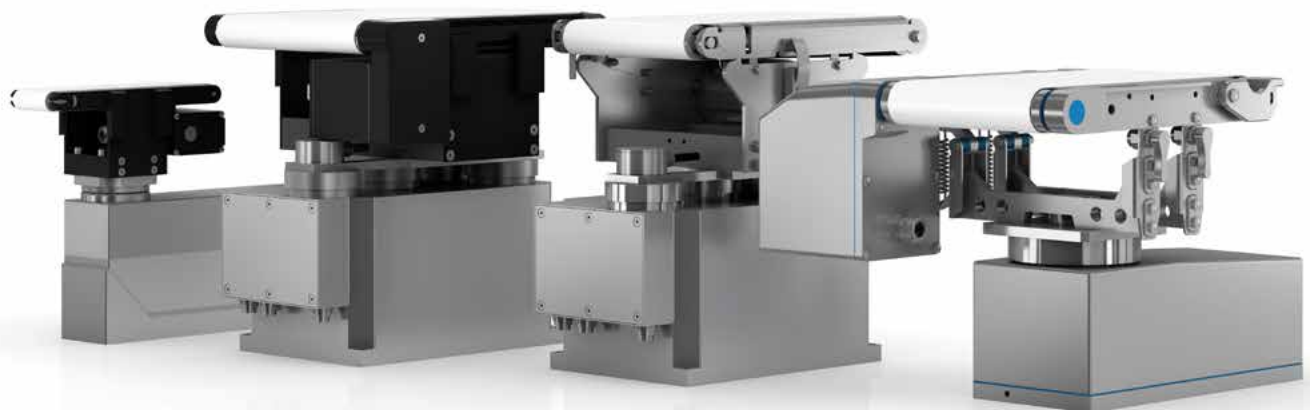
Market-leading technology

WIPOTEC Weigh Cells are remarkable in the market due to a high degree of differentiation. Based on the principle of electro-magnetic force restoration, they provide the most accurate and fastest weighing technology which is impressive due to extremely short settling times and high repeatability. The result for the customer: the best sensor technology, enabling precise weighing results at maximum throughput. This also offers the possibility of optimising weighing-technology-relevant production processes within the line.

MMS (Modular Multilane System) is ideally suited for multi-lane use and is installed particularly in filling and packaging machines. When combined with the AVC technology (Active Vibration Compensation), excellent weighing results are achieved without loss of performance, even in production environments with high levels of vibration.

Pharmaceuticals

WIPOTEC works very successfully with manufacturers of filling machines for large pharmaceutical companies in both Canada and the USA. Their production lines require Weigh Cells that deliver high weighing precision for small products. In these





*Our goal:
maximum line
efficiency by
integrating
market-leading
Weigh Cells.*

Jack Smith

Sales Director, North America
WIPOTEC Weighing Technology

applications, individual pills, capsules, syringes or vials are typically weighed. The weight of syringes and vials is measured during the filling process and in tare/gross applications, while pills and capsules are usually weighed downstream of the moulding machine. Given the compliance with local packaging and purity regulations, pharmaceutical companies place high demands on the performance features of weighing technology. Customers are often impressed because WIPOTEC's weighing technology exceeds both the specified speeds of the production line and weighing accuracy in the microgram range. This also ensures sufficient reserves for future requirements.

Cannabis

Medical and recreational use of cannabis is legalised at the federal level in Canada, with some local restrictions which vary according to province and municipality. Nationwide legalisation has led to the enactment of extensive federal regulations on cannabis packaging and product purity, similar to the drug laws in other countries. Several large Canadian companies dominate the emerging legal cannabis market around the world. According to official estimates, products worth between 8 and 9.7 billion US dollars were traded on the North American cannabis market at the end of 2017. The North American market is expected to grow to 47.3 billion US dollars by 2027. In the legalised area, the share of medical marijuana is approximately 33%.

The cannabis market in Canada has opened up several new market opportunities for WIPOTEC. In 2018, the company sold a substantial number of Weigh Cells to OEMs in Canada that manufacture scales for the cannabis processing industry. OEMs have come up with new machine concepts for cannabis packers who use WIPOTEC Weigh Cells. These new machine concepts, which are currently in use throughout Canada, reduce the number of weighing containers required. The reduction in weighing

containers creates valuable floor space which helps cannabis producers and packers to keep pace with the explosive growth in the legal cannabis market. The higher speed and accuracy of the OEM weighing machines facilitated by WIPOTEC Weigh Cells help manufacturers to comply with the packaging regulations, while at the same time avoiding costly overfilling.

Additional opportunities are emerging for WIPOTEC as the global cannabis market continues to develop. They include checkweighers and X-ray inspection equipment for the legal cannabis market. Since more and more countries are legalising the medical and recreational use of cannabis, serialisation and aggregation requirements similar to those of the pharmaceutical industry could soon become relevant. In this area, WIPOTEC-OCS supplies innovative Track & Trace solutions for pharmaceuticals, cosmetics, food and non-food industries.

Ammunition

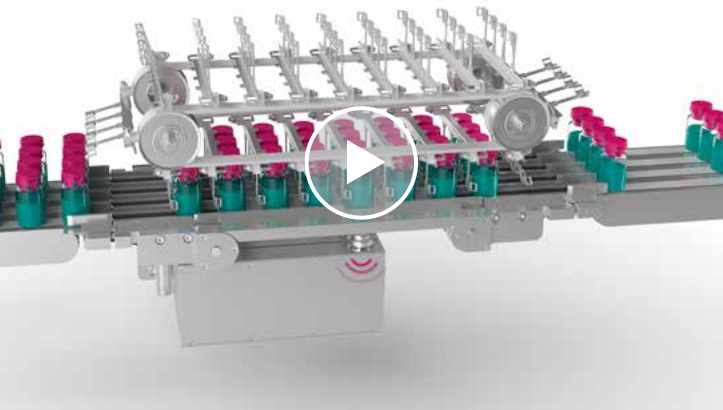
Armaments suppliers to the US Department of Defense (DOD) and NATO countries, including OEMs and their customers, produce under stringent security conditions. Ammunition from the smallest bullet to the largest artillery shell must be manufactured with the highest precision and accuracy. It is essential for machines working in this sensitive production environment to be operationally reliable. OEMs serving this market segment in the USA use a number of different WIPOTEC Weigh Cells. The choice of weighing sensor used in a specific application depends on the type of ammunition, the machine configuration and the machine's operating environment. Irrespective of the special production features, the unique selling points of WIPOTEC Weigh Cells, namely accuracy, highest precision and repeatability, has led to a high level of acceptance in this segment. WIPOTEC Weigh Cells also provide the operational reliability which is absolutely essential in the field of ammunition production.

Where we go from here

As we see it, the main task in the US market and Canada is to help customers in new and emerging markets to increase efficiency in their production and packaging operations. The flexibility and product diversity which the WIPOTEC team can offer OEMs and system integrators is unmatched in the industry. The team and its internationally successful product range are ready to offer existing customers and potential new customers solutions for the best possible integration of weighing technology. WIPOTEC Weighing Technology, in its role of advisor, is ready to develop the best solution in sustainable, long-term partnerships. This is the philosophy based on which the WIPOTEC Weighing Technology Team has successfully grown and will continue to grow in North America. ▲

WEIGHING LIGHTWEIGHT PRODUCTS

High cycle speeds, high throughput: precision weighing technology for integration in multi-lane production machines.



Large volumes of lightweight products are produced mainly on multi-lane systems in order to achieve the highest possible throughput. These are often small packaging types such as stick packs (longitudinally-welded small tubular bags), coffee/tea pods, injection vials or syringes. The lines include Weigh Cells or integratable weighing kits which, in addition to quality assurance by means of inline weight checking of individual products, are also used for trend control of filling machines.

Multi-lane checkweighers

For lightweight products, WIPOTEC has developed special multi-lane checkweighers which can be equipped with both traditional conveyor belt and push-over technology. They incorporate particularly slim, compact Weigh Cells with which the smallest possible lane spacings and maximum accuracy can be achieved. They can also be equipped with the exclusive AVC technology (Active Vibration Compensation) which effectively helps to compensate environment-related vibrations. In push-over systems, the Weigh Cell is completely separated mechanically from the product transport. Each product is pushed over the weighing platform by a pusher dog. Only one central servomotor is required for all lanes. Products with incorrect weight may be ejected according to lane or holistically.

Tare/gross weighing

In tare/gross weighing of products, the weight of the container still to be filled is determined. The total weight is obtained by weighing after filling. The checkweigher assesses the result within the tolerance and rejects products with incorrect weight. This process is particularly suitable for detecting weight fluctuations of vials or other containers of the pharmaceutical industry.

Dedicated for applications in the wet area, checkweighers can also be designed to meet protection class IP69K. The filling system itself can be precisely controlled via feedback signal from the weighing system, thus ensuring a correct filling weight.

Modular Multilane System (MMS)

For machine builders, WIPOTEC offers a range of OEM weighing systems which are designed as modular multi-lane systems (MMS). They are made up of a family of AVC-compatible Weigh Cells and permit lane centre-to-centre distance down to 25 millimetres. The Active Vibration Compensation technology (AVC) developed by WIPOTEC Weighing Technology enables the most precise weighing results even in non-vibration-free environments, as is frequently the case in the production of syringes and vials. With the mass-produced MMS systems, customers can configure the number of lanes and lane centre-to-centre distance themselves, thus assembling their own multi-lane weighing systems. ▲

QR code for the full videos:



/LEGAL INFORMATION

Weigh Up, WIPOTEC customer magazine

PUBLISHED BY
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VAT ID no. DE 148 637 446

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PICTURE CREDITS
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PRINTED BY
KD Medienpark Faber GmbH, Kaiserslautern

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