



Hans J. Michael GmbH



The DM6 M LIBS 2-in-1 microscope comes with integrated chemical analysis

Save 90% of Time When Doing Materials Analysis



The new DM6 M LIBS microscope for materials analysis from Leica Microsystems allows you to analyze the 2 main characteristics of a material in 1 work step, i.e., microstructure and composition. The microscope has an integrated laser spectroscopy (LIBS) function and delivers the chemical composition of any microstructure that you see in the field of view within a second. Compared to typical downstream analysis with electron microscopy, this solution saves you up to 90% of the time.

“According to what we hear from our customers, this new way of working made possible with the DM6 M LIBS solution can replace a long-established and accepted effort-intensive workflow in almost all areas of application,” says Markus Lusser, President of Leica Microsystems. “We at Leica Microsystems are proud to have again challenged the standard and now offer a real game changer. The new workflow is considerably faster and thus more economical. The solution reduces production costs and gives the opportunity to extend

tests, increasing the quality of the results and ultimately of the final products.”

The smart 2-in-1 system eliminates the need for sample transfer and the time for sample preparation and set up for electron microscopy. All the relevant information to make the right decisions during inspection is available within seconds. With the DM6 M LIBS solution, users can focus in on a material structure of interest, then trigger the LIBS analysis with a single click. The sample remains in air during the entire analysis. The resulting spectra show the fingerprints of the elements present in the area investigated. The chemical composition will be precisely identified.

Materials inspection is important for quality control, failure analysis and research and development in multiple industries and fields, like metal alloy, automotive, electronics, and materials science.

Leica Microsystems GmbH
D 35578 Wetzlar

Inserts for automated cleaning of tool holders

Cleaning tool fixtures faster, process reliable and more economically

Whether it is drilling, milling or turning – residues from the machining are not only left on the part surface but also in the tools and fixtures. Cleaning of the latter is usually still done manually, even though cleaning of the manufactured parts is carried out in a cleaning machine. Specifically, for tool holders (e.g. HSK) and tool fixtures, Metallform has developed inserts, which can be easily placed in standard cleaning baskets. They enable the fast, process reliable and economical automated cleaning as well as transport of the assembled tool holder.

Clean tool holders significantly contribute to precision in machining. Therefore, it is surprising that fixtures are still frequently manually cleaned before the tools get replaced, because this process does not ensure that swarf and residues from processing media get removed reliably. Another disadvantage is the high demand on personnel and time caused by each manual process. Additionally, cleaning is usually performed with costly compressed air or brushes and a low flashpoint solvent such as benzine, although virtually every company that manufactures machined parts is equipped with a cleaning machine.

Special inserts enable easy automated cleaning

In order to be able to clean the equipped tool holders also in the cleaning machine, Metallform has developed specific inserts for standard cleaning baskets such as the MEFO-BOX. The inserts are availa-



For cleaning, the inserts get fixed in a MEFO-BOX or standard cleaning basket. According to the dimensions of the working chamber of the cleaning machine, various and even different inserts can be placed in a basket. (Image source: Metallform Wächter GmbH)

ble for different tool fixtures, e.g. HSK, Conus, VDI and SBA and can be adapted to the type and size of the holders. Fixation of the holder in the insert only takes place at uncritical areas.

Adapted to the size of the working chamber of the cleaning machine, the equipped tool fixtures can be placed vertically or horizontally – e.g. for deep-hole drills – in the insert. This also allows for placing the tool holder directly at the machine or machining centre into the insert and for transporting it safely to the cleaning machine. For cleaning, various and even different inserts can be placed in a MEFO-BOX or standard cleaning basket.

On the one hand, this makes the cleaning of tool holders faster and more process reliable. This is especially due to the open design of the inserts which allows the cleaning medium and mechanics, e.g. ultrasonic waves or spray jet, to reach the tool holders freely from all sides. In order to improve the cleaning effect, the basket can be swivelled in the machine. On the other hand, automated cleaning increases efficiency. Staff that had been cleaning the tool holders manually can now spend their time with more productive work.

After cleaning and replacing tools the holders can be transported back to the metal cutting machine safely and without damages.

Carefully processed stainless steel

Like all cleaning baskets from Metallform, the inserts are made of stainless steel with an electrolytic polished surface. This high-quality material can be used with all cleaning media and ensures a long service life. The outer structure's rods are butt welded to avoid corners posing the risk of injury.

Metallform Wächter GmbH
D 75004 Bretten

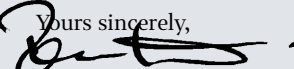


Dear subscribers,

first of all I want to wish you a happy, healthy and successful new year.

LOUNGES 2018 in Karlsruhe is coming up on 02.-08. February and you can still take advantage of our registration **code rronline2018** to get free entrance to the fair and all speeches and workshops. If you wish to read more about this event, take a look at the German newsletter DE 01-2018.

We will go on collecting a lot of interesting material and reports for you in 2018 as well and keep you informed throughout the year with our newsletter. End of January you will receive the Cleanroom Yearbook 2017/2018 with the most important and interesting cleanroom issues of the last twelve months on nearly 200 pages.

Yours sincerely,

Reinhold Schuster

Facility creates instant access to a team of highly talented, knowledgeable employees and proven quality systems

Phillips-Medisize Creates a Manufacturing Center of Excellence for Connected Health and Drug Delivery Devices

Phillips-Medisize, a Molex company, announces its initial investment to expand the capabilities of the 380,000 square foot Molex Little Rock facility to include a FDA registered manufacturing Center of Excellence for Connected Health and drug delivery devices.

The construction of purpose-built clean room suites, as well as FDA registration and ISO 13485 certification are scheduled to be complete for its first customer's production beginning in Q2 2018. This facility establishes a new manufacturing site in Little Rock, Arkansas for Phillips-Medisize's medical business with capabilities for filling, drug handling, electronics and connected devices. This investment aims to combine the innovative solutions and knowledge of Molex's existing electronics production operations with Phillips-Medisize's proven platform of drug delivery and medical device expertise.

"Phillips-Medisize is excited to align with Molex on the transformation of the Little Rock facility, which will be a Center of Excellence for Connected Health and drug delivery devices and manufacture products that fit in today's world of innovative devices. This facility will also allow us to accommodate large programs requiring extensive assembly and molding operations, in clean room and other controlled environments, within a compressed timeframe. The facility will have

a particular focus on mid- to high-volume diagnostics, medical device and drug delivery systems that integrate electronics and digital applications, and will provide us with the additional space needed to reach our growth objectives over the upcoming years," remarked Matt Jennings, CEO and President of Phillips-Medisize.

This will be the company's sixth expansion in the past six years to support long-term growth of its medical contract manufacturing business. In June 2017, the Company completed a new 80,000 square feet facility in Menomonie, WI, Phillips-Medisize. Earlier in 2016, Phillips-Medisize opened a 17,000 square foot dedicated clinical and pilot build facility for drug delivery and combination devices in Menomonie, Wisconsin. In November 2015, the Company doubled the size of the New Richmond, Wisconsin medical device facility, and in late 2014, expanded its Finland facility. These investments demonstrate ongoing support for biopharmaceutical and device customers by providing design, development, and manufacturing solutions for both mechanical and connected devices across multiple geographies.

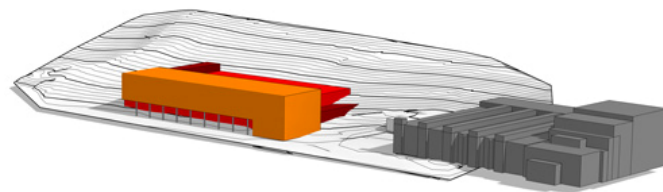
Phillips-Medisize Corporation
CH 8309 Nürensdorf

ebm-papst is building a new, 41 million € Development Center

Space for creativity and innovation

ebm-papst is continuing its course for growth and plans a new development center at the ebm-papst company headquarters in Mulfingen. The global technology leader for fans and motors will invest around € 41 million in the building.

The aim of the new building is to double the available floor space in order to meet the increased requirements of recent years. Once completed, the 11,000 square meters of office space and 7,500 square meters of laboratory space will accommodate approximately 500 employees of research and development. For the different departments



(Image ebm-papst / Architekturbüro Kraft+Kraft)

and divisions, this will create an environment enabling a more modern and efficient collaboration.

Stefan Brandl, Chairman of the Board of Directors of ebm-papst Group, explains: „With the construction of our new Development Center, we once again are investing heavily in our Mulfingen location. With modern laboratory equipment and new forms of workplace design we want to orient the company towards the future and thus continue to drive the expansion of our leadership in innovation.“So that the research and work spaces meet the latest methods and standards, among others, the Fraunhofer Institute IAO is involved in the planning of the new building and its equipment. Detailed planning also ensures that communication and creativity zones are available in addition to the necessary functionality.

The building, which will be designed in accordance with the ebm-papst GreenTech guideline, is to be completed in early 2020.

ebm-papst Mulfingen GmbH & Co. KG
D 74673 Mulfingen



(Image Philipp Reinhard)

Sino-German strategic cooperation creates a new chapter for Pfeiffer Vacuum in China

- Strategic cooperation agreement signed by Pfeiffer Vacuum and Lanzhou Institute of Physics (LIP)
- LIP-Pfeiffer Vacuum Joint Center for Vacuum Technology established in Lanzhou

Pfeiffer Vacuum signed a strategic cooperation agreement with Lanzhou Institute of Physics (LIP) in Asslar, Germany. As one of the founders of the Chinese Vacuum Society, the Lanzhou Institute of Physics is a pioneer in vacuum technology in China. LIP is also one of the first institutes in China which has been directly engaged in satellite and spacecraft development and is therefore a part of the China Academy of Space Technology (CAST) since 1968. Pfeiffer Vacuum and LIP will cooperate in research and development to create vacuum solutions for aerospace applications, vacuum metrology, vacuum calibration and other applications.

The strong cooperation between the two companies is in line with the common interests of both sides. Pfeiffer Vacuum is contributing with its extensive line of solutions, products and services ranging from vacuum pumps, measurement and analysis equipment to complex vacuum systems and its global sales and service network, while LIP is introducing its leading position in the China vacuum industry.

On October 17, 2017, the LIP-Pfeiffer Vacuum Joint Center for Vacuum Technology was established in Lanzhou, Gansu province. The

center will provide the platform for future projects and joint developments. As mentioned by LIP during the opening ceremony, it will connect 'Made in China 2025' and the German 'Industry 4.0' initiatives.

The start of the cooperation between Pfeiffer Vacuum and the Lanzhou Institute of Physics is in conjunction with the 10th anniversary of Pfeiffer Vacuum in China – 10 years of committed dedication in China. "We hope that with our experience and advanced technology we can provide leading vacuum solutions and first-class service to create a bright future for our Chinese customers", said Vic Chen, General Manager of Pfeiffer Vacuum (Shanghai) Co., Ltd.

Pfeiffer Vacuum GmbH
D 35614 Asslar



Unveiling ceremony of the LIP-Pfeiffer Vacuum Joint Center for Vacuum Technology in Lanzhou, Gansu Province, China.

Cleanzone 2018 is gathering momentum: Numerous companies have already registered



On 23 and 24 October 2018 in Frankfurt am Main, the spotlight will once again be on new developments and innovations in the field of cleanroom technology. Be it pharmaceuticals, food or microtechnology, innovative high-tech industries can find new solutions for planning, constructing and operating cleanrooms at Cleanzone. The trade fair is renowned for its international and interdisciplinary approach, which brings together all industries that utilise cleanroom production under the same roof. Ruth Lorenz, Vice President Technology at Messe Frankfurt, explains: "As an interdisciplinary event, Cleanzone addresses current issues from across the industrial spectrum. In 2018 there will be a particular focus on pharmaceutical trends, in order to offer more ideas and inspiration for the large number of visitors coming from the field of life sciences."

Never before have so many companies been registered for the next Cleanzone nearly a year before it opens its doors. Numerous national and international market leaders have already signed up for the trade fair, including basan, Briem Steuerungstechnik, BSR, Colandis, CRTM CleanRoomProducts, Hydroflex, IAB Reinraum Produkte, KEK, MEC Industries, Micronclean, MK Versuchsanlagen, profi-con, pure11, Spetec, Siemens, TSI and vali.sys. In addition, the German Cleanroom Institute (DRRI) and a group of companies associated with mycleanroom.de have also declared that they will be back. Andreas Maul, Member of the Executive Board of the DRRI, explains expectations for Cleanzone: "The Cleanzone trade fair plays a key role for the German Cleanroom Institute (DRRI), as it makes it possible to discuss pioneering trends with an international group of professionals."

According to a survey conducted for Cleanzone 2017, 82 percent of visitors believe that the trade fair showcases the pioneering developments and innovations in the field of cleanroom technology. That is also the reason why Michael Selker from packaging provider Bischof + Klein came to Frankfurt: "I visited the trade fair to find out about innovations in the cleanroom industry. Cleanzone is a high-quality event focusing on cleanroom technologies that offers a well-organised platform for networking."

In addition to the Cleanroom Award innovation award, the trade fair also brings universities and research institutes to Frankfurt while promoting innovative start-up solutions. Wolfgang Hassa from first-time exhibitor Mecora Medizintechnik (spairlab)



Image source: Sandra Gätke, Messe Frankfurt Exhibition GmbH

was impressed by the 2017 event: "Coming from another field as we do, Cleanzone was very productive for us, and we had excellent talks with an international group of professionals." It is an opinion that is also reflected in the exhibitor survey for the most recent Cleanzone: 85 percent of exhibitors (2016: 70 percent) said that they had succeeded in reaching their target groups. Exhibitors were also impressed by the number of new leads they generated at the trade fair, something that allows them to enter new areas of application.

With the Cleanzone Congress, Cleanzone Plaza and numerous other offerings, the trade fair will boast an extensive supporting programme covering the industry's themes and trends yet again in 2018. Cleanzone's supplemental programme was also impressive in 2017, combining specialist information with the opportunity to talk with experts and exchange ideas on their own production requirements. Around 30 percent of visitors (2016: 21 percent) stated that Cleanzone's numerous events were one of the reasons why they decided to visit.

cleanzone

cleanzone
Ludwig-Erhard-Anlage 1 D 60327 Frankfurt am Main
Telefon: +49 69 7575 6290 Telefax: +49 69 7575 96290
E-Mail: anja.diete@messefrankfurt.com
Internet: <http://www.messefrankfurt.com>

ENGEL at Interplastica 2018

Smart solutions for greater productivity, quality and cost effectiveness



ENGEL is making its customers more competitive with flexible and efficient machine concepts along with automation from a single source. The system expert based in Schwertberg, Austria, will demonstrate what this means in practical terms by presenting two technically sophisticated applications at Interplastica 2018, which takes place from January 23 to 26 in Moscow, Russia. At the same time, the company will highlight the new opportunities that digitalisation and networking are opening up for plastics processing firms.

In many cases, wristwatches require sales packaging that is not just high quality, but original – in the form of globes, for instance. Over the four days of the trade event, ENGEL will use a mould supplied by its customer Betar to produce base bodies for globes on an ENGEL victory injection moulding machine. Hemispheres that can be put together will be moulded. Based in Chistopol (midway between Moscow and the Urals), Betar manufactures numerous products for gas and water metering and a great many plastic articles for customers. Flexibility is an essential characteristic of the company's production equipment, which is why the company mainly invests in tie-bar-less injection moulding machines from ENGEL's victory range. "Free access to the mould area makes it much quicker to install and remove moulds," stresses Olaf Kassek, Managing Director of OOO ENGEL in Moscow. "Thereby, tie-bar-less technology significantly improves the availability of injection moulding machines when producing small batch sizes." Tie-bar-less technology also enables compact manufacturing cells, which is especially advantageous when producing complex, three dimensional parts and using multi-cavity or multi-component moulds. In such cases, the moulds have a large volume and the injection moulding process tends to require relatively small clamping force thanks to rather short flow paths. Tie-bar-less technology makes it possible to choose the machine size on the basis of the clamping force actually required, rather than the mould size. Given that mould fixing platens can be used to the hilt, even small injection moulding machines can be fitted with large moulds.

Consistent processes despite variable pellet quality

The victory machine on show in Moscow will have a new generation injection unit. On the basis of its extensive experience across the many different application areas for its injection moulding machines, ENGEL has restructured the sizes of the hydraulic injection units and further optimised performance data such as injection pressure, in-



The injection moulding machines in the victory and e-victory series enable compact manufacturing cells and highly efficient automation concepts thanks to their barrier-free clamping units. (Picture: Engel)



iQ weight control compensates for process fluctuations before rejects are produced. The intelligent assistance system is available for electric and hydraulic injection moulding machines. (Picture: Engel)

jection speed and plasticising performance. The long established ENGEL servohydraulic ecodrive is standard equipment in the new machine models. Depending on the type and size of machine and the application, this cuts the energy requirement by 30 to 70 percent. Key to this is needs-based pump capacity. When a machine is idle (for example, during cooling phases), the engines also close down and consume zero idling energy. As positive side-effects, the machine runs much quieter and the hydraulic oil is not heated as much, which reduces the amount of energy needed for oil cooling.

Visitors to the trade fair will also be able to track the workings of iQ weight control live on the control panel of the victory machine. During the injection process, the software analyses the pressure profile in



Compact integration: The pipe distributor fits in the machine's safety guard. All parts that are in contact with the product are stainless steel. (Picture: Engel)



The filigree needle holders are designed with a predetermined breaking point that makes it impossible to use disposable syringes multiple times. (Picture: Engel)

real time and compares measured values by means of a reference cycle. For every shot, the injection profile, switchover point and the holding pressure profile are automatically adapted to current conditions and the injected melt volume is kept consistent throughout the production operation. This compensates for fluctuations in environmental conditions or moulding compound before rejects can be produced.

ENGEL uses the iQ prefix to denote the expanding number of intelligent assistance systems in its inject 4.0 range. These enhance the quality and efficiency of production without requiring machine operators to acquire specialist knowledge. Five years ago, iQ weight control became the first iQ system to be launched; since then, more than 1,500 of the systems have been sold worldwide. In-

Smart solutions for greater productivity, quality and cost effectiveness

tially, the software was limited to use with injection moulding machines with electric injection units; now iQ weight control is also suitable for hydraulic machines. "Feedback from the market has been excellent," says Kassek. "iQ weight control significantly increases reproducibility in hydraulic victory machines."

Maximum integration with a minimal footprint

ENGEL will bring a second exhibit to Moscow to demonstrate how to maximise the efficiency potential of tie-bar-less technology in the field of medical technologies as well. Compact manufacturing cells are particularly beneficial in the cleanroom environment. Two years ago, ENGEL developed a stainless steel pipe distributor for the cavity-specific handling of small injection moulded parts; this will be presented at Interplastica with a totally new and more compact design. Thanks to tie-bar-less technology, it is situated next to the clamping unit of the ENGEL e-victory 80 injection moulding machine and completely fits into the machine's widened safety gate.

At the trade event, the highly compact manufacturing cell will produce needle holders for 1ml safety syringes using a 16-cavity mould. An ENGEL viper 12 linear robot will remove the delicate polystyrene parts from the mould and transfer them to the distributor system. To ensure batch traceability to the level of individual cavities, the injection moulded parts will be packed in cavity-specific bags. For this purpose, 16 bags will hang in a cart directly beneath the pipe distributor. Individual shots can be extracted for quality control purposes.

For unmanned cleanroom operation – for example, during night shifts – two carts can be alternated in sequence, with a buffer system enabling the fully automated exchange. The entire periphery for this is integrated into the CC300 control unit of the injection moulding machine. Thanks to shared data storage, the CC300 can precisely coordinate the movements of the machine and the robot with each other, thus optimising overall efficiency. The total cycle time for this application is just six seconds.

The delicate needle holders, which have a shot weight of just 0.08g and varying wall thicknesses, require extremely precise process control. ENGEL guarantees this through the electric injection unit of the hybrid e-victory machine and iQ weight control.

Immediate response, 24/7

The two machines at the ENGEL stand will be linked so that machine statuses and



The full cleanroom design of the highly integrated production solution for manufacturing needle holders for safety syringes will be presented at Interplastica. (Picture: Engel)

process data can be tracked in real time via a central computer. In this way, ENGEL will be able to showcase other products from its inject 4.0 range in Moscow. For example, e-connect.24 enables remote maintenance of injection moulding machines and production cells, even at distant production locations. Qualified ENGEL service engineers can be contacted directly 24 hours a day, seven days a week. As soon as they receive a service request, they use a secure remote connection to start troubleshooting and providing specific online support. "In many cases, faults can be resolved over the internet," says Olaf Kassek. "Users benefit from the fact that they don't need to call out a service technician, which is expensive and time-consuming, and from the greater availability of their production system."

Keeping an eye on production

At its stand, ENGEL is dedicating an individual expert corner to the MES authentig. The Manufacturing Execution System was developed by T.I.G. Technische Informationssysteme GmbH, which has been part of the ENGEL Group for one year. With the integration of T.I.G. into the ENGEL Group, both companies have combined their MES know-how and their many years of experience with MES projects worldwide, thereby achieving innovation at an even faster pace.

Tailored to the specific requirements of the injection moulding industry, authentig offers particularly deep vertical data integration, down to the level of individual cavities. The software creates transparency in order, for example, to optimally utilise the available capacity of a machine park, or to correlate productivity ratios with economic goals. The MES has a modular structure and can be precisely adapted to the individual requirements of the processor.

„Energy“ is the most recent authentig module. Not only does it make the energy consumption of individual consumers in the injection moulding operation transparent, but it also reliably caps peaks in the power demand. This is made possible by defining situational consumption limits for each individual consumer, and then dynamically allocating the pre-defined power amounts to the consumers. This intelligent hall management can thus help to significantly reduce the energy costs for the machine pool.

**23rd - 26th January 2018:
Interplastica Moscow, Moskau (R)**

ENGEL AUSTRIA GmbH
A 4311 Schwertberg

Arburg at the **Pharmapack Europe 2018**

First-hand expertise



- As a system supplier, Arburg offers everything: from machines through to complex turnkey projects
- Broad Arburg product range for the medical and packaging technology sectors
- Expert team on hand at industry event

07th - 08th Feb. 2018: Pharmapack Europe, Paris (FR)

On 7 and 8 February 2018, Arburg will be represented in hall 7.1, stand H11 at the Pharmapack Europe 2018 in Paris (France). Here, the experts will provide information on the extensive range of machines and solutions for plastic part production in the medical technology, clean room and packaging sectors. The machines range from high-speed, high-performance models and clean-room Allrounders in stainless steel versions to the Freeformer for industrial additive manufacturing, as well as automation solutions and complex turnkey systems.

„The current trend towards local product manufacturing in the pharmaceutical and medical industries will increasingly lead to investments in highly automated manufacturing facilities in Europe. Our team of experts pools years of experience in medical technology and pharmaceutical packaging, which we offer our customers in the form of tailor-made solutions,“ says Martin Manka, Senior Sales Manager Medical at Arburg. „The new requirements in the production of pharmaceutical and medical technology products demand the highest precision and reliability from the injection moulding machines. Whether hydraulic, hybrid or electric – our Allrounder machines meet the stringent clean room requirements of the ISO and GMP classes.“ The excellent connectivity of the machines has been proven in medical turnkey projects, adds Manka. Traceability in quality management according to the new Medical Device Regulation (MDR) of the European Union is supported via the Arburg host computer system (ALS).

High-speed, high-performance machines

Further trends include high-speed, high-performance machines for pharmaceutical packaging and the use of complex moulds, including cube-mould technology. Here, there are increasing synergy effects with the packaging industry, where Arburg also possesses a high level of expertise and sophisticated machine technology.

The „Packaging“ versions of hybrid and electric Allrounder injection moulding machines are designed for high-quality and efficient high-volume production and are therefore ideally suited to the manufacture of thin-walled mass-produced items, closures, pipette tips or syringe barrels. They are characterised by short cycle times, reproducibility, reduced energy requirements, as well as process stability and a long service life.

Production concepts for clean room conditions

All Arburg injection moulding machines

are individually configurable so that they can be precisely tailored to the relevant requirements, including the control system, automation and peripheral equipment. A variety of clean room concepts and the extensive experience of the Arburg team of experts over many years, as well as cooperation with competent cooperation partners, result in reliable, high-end solutions in the pharmaceutical and medical technology sectors. The spectrum ranges from machines that are docked to a clean room, through to complex production cells directly in the clean room itself. Which variant is used in individual cases depends primarily on the specific customer and part requirements.

Automation and complex turnkey systems

One example of an automated medical high-end application is the production of pre-filled COP syringe barrels with a stainless steel electric Allrounder that meets the stringent GMP requirements. A laminar-flow box above the clamping unit ensures clean production conditions and prevents electrostatic discharge.

Ambitious material processing

Plastic products that perform preventive or therapeutic functions within the body in the form of drug implants have enormous potential. One example of this is the production of a vaginal ring for HIV prevention. In this case, Arburg acted as primary contractor, developing and implementing a complete production cell. This complied with validation of the guidelines for medical devices in Europe (MDR) and the US (FDA).

Micro production cell for tiny parts

Arburg offers a complete micro-production cell that can be flexibly used for the reproducible production of extremely small



The electric Allrounder 520 A with a stainless steel clamping unit meets the stringent quality requirements that apply to the production of medical technology parts. (Photo: Arburg)

First-hand expertise

parts and micro implants, as required in minimally invasive interventions. This comprises a small electric Allrounder 270 A injection moulding machine equipped with a Euromap size 5 micro injection unit and a horizontal dual arm robot for the reliable separation of micro components and sprues. The micro injection unit combines an 18 or 15-millimetre screw for melting the material with an 8-millimetre screw for injection. This enables problem-free processing of normal granulate sizes and therefore all common materials.

Additive manufacturing in medical technology

Arburg offers the Freeformer for additive manufacturing of one-off parts and multi-variant small-volume batches, which could also be used in a clean room setting. The freedom in the choice of materials offered by this open system opens up completely new applications: Arburg demonstrated that the Freeformer can in principle also process medical PLLA, based on the example of facial, cranial and hand bones. Other applications include personally customised surgical aids, such as positioning templates for prosthetic implantations.



Martin Manka, Senior Sales Manager Medical at Arburg. (Photo: Arburg)

ARBURG GmbH + Co KG
D 72290 Loßburg

Even at high temperatures and under compressive stress

GEMÜ 677HP PurePlus ultra-pure diaphragm valve

Thanks to making consistent improvements to processes and investments in state-of-the-art manufacturing technologies, valve specialist GEMÜ can offer its customers plastic diaphragm valves with a significantly higher pressure-temperature rating.

Numerous applications in the semiconductor, foodstuff and pharmaceutical industries benefit from plastic diaphragm valves with a high pressure-temperature rating. They ensure safe operation not only at high temperatures but also under high pressures. The diaphragm valves in the GEMÜ 677HP PurePlus series exhibit improved properties with regard to the relationship between pressure and temperature. This makes them perfect for treating and distributing high-temperature ultra-pure water (hot deionized water) and means that they play a direct role in ensuring the reliability and efficiency of users' production processes.



Users working in the semiconductor industry need a downstream cleaning process with ultra-pure water in the wet process section in order to remove the caustic agent. To minimize cleaning times, they use high-temperature ultra-pure water (between 60 °C and 90 °C). However, the chemically aggressive properties of high-temperature ultra-pure water pose a challenge for the process valves. All the valves that come into contact with high-temperature ultra-pure water must be able to guarantee resistant and low-maintenance sealing at elevated and varying temperatures. This is made possible by the reliable valve seat seal used in the diaphragm valves in the GEMÜ 677HP PurePlus series, which is capable of withstanding high loads. The integrated sealing contour in the chemically resistant valve bodies made of Solef PVDF, combined with the precision-fit GEMÜ PTFE diaphragm, makes the diaphragm valve suitable for this demanding application. The results of extensive qualification and field tests – as well as feedback from long-standing customers – have gone into optimizing the valve seat seal. This means that the GEMÜ 677HP PurePlus valve can be reliably employed in an ultra-pure water treatment system even at media temperatures of between 60 °C and 80 °C, and at an operating pressure of 5.9 to 7.9 bar (depending on the media temperature).

The valve body of the GEMÜ 677HP PurePlus is available both in a 2/2-way version and in a T-body configuration with a nominal size of DN 15 to DN 100. A lockable, low-maintenance bonnet ensures operational safety, and can be delivered with an integrated electrical position indicator upon request.

GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
D 74653 Ingelfingen

The MEDICAlliance provides a one-stop shop for marketing power, enabling companies to access attractive markets and business in a range of countries

A significant international impact has always been and remains **MEDICA** and **COMPAMED**'s trump card - visitors hail from over 130 countries



“MEDICA and COMPAMED have always had a high degree of international impact, and this remains their trump card. Top decision makers from around the world come together here and see the huge breadth of what we have on offer, which is the international frontrunner and has yet to be beaten”, Joachim Schäfer, Managing Director of Messe Düsseldorf, said, summing up the four-day run (from 13-16 November 2017) of the world's biggest medical trade fair and the international leading specialist trade fair for the supplier market for the medical technology industry. Of a total of 123,500 professional visitors, over 60% came from countries outside Germany, from 130 different countries. Among these were visitor groups with members who were the top of their field, from China, India, Columbia and Nepal, along with visitor groups from the most important markets for medical technology in Europe who have attended for years and years.

MEDICA also proved to be first place globally in terms of its exhibitors; Joachim Schafer underlined this: “A large proportion of our 5,100 exhibitors came from abroad, from 66 countries, presenting innovations covering all the needs for the outpatient and inpatient care sectors. Despite the renovations taking place in our trade fair premises and the fact that the area that housed Halls 1 and 2 was not available for this year's MEDICA, we hit the same booking profit as the previous year. With the temporary lightweight construction Halls 3a and 18, we were able to respond to almost all requests for exhibition space successfully.”

The current reports from the trade associations highlight how important the stimulus for international business that MEDICA and COMPAMED provide is for the service providers. According to the German Medical Technology Association BVMed, the medical technology industry expects to see an increase of almost 6% in its global turnover, and this will be driven by dynamic developments in the export market. In comparison, domestic trade will experience a relatively low growth of 2.8%, predicted to result in overall turnover of 30.6 billion Euros. These are the outcomes of the latest survey of 106 German and foreign manufacturers. At the time that MEDICA was on, the trade associations SPECTARIS and ZVEI also confirmed

that their member companies were experiencing far more growth in export business than they were in comparison to domestic demand, which is marked by a plunge in capital expenditure, and the inpatient and outpatient sectors.

A new umbrella brand brings together international expertise

In addition to the opportunity to make many international business contacts, which the service providers were offered once again this year at MEDICA 2017, the opportunity to participate in other medical trade fairs in attractive continental markets is also growing in significance. “For many years, our successful healthcare events abroad have offered the ideal platform to unlock the growth potential of prospering economic regions”, explained Horst Giesen, Global Portfolio Director for Health & Medical Technologies at Messe Düsseldorf.

A new umbrella brand, MEDICAlliance, was introduced at MEDICA 2017 for this purpose, enabling both exhibitors and visitors to navigate these options easily. Horst Giesen sums it up: “Based on our world-leading trade fairs MEDICA, REHACARE and COMPAMED, we are offering global event expertise throughout the entire value-added chain and supply chain for medical care and rehabilitation, as well as the corresponding supplier products and services under this new label.” The specialist trade fairs MEDICAL FAIR in Mumbai, New Delhi, Singapore, Bangkok, Suzhou and the MEDICAL MANUFACTURING ASIA trade fair (in Singapore) and INTEGRATION (Moscow) and more are all part of MEDICAlliance. The new umbrella brand MEDICAlliance encompasses all of Messe Düsseldorf's global trade fair activity and its subsidiaries in the health sector. This includes strategic partnerships for events, such as HOSPITALAR (Sao Paulo) or ZDRAVOOKHRANENIYE (Moscow).

The partnership with MEDITECH Columbia (Bogota) is brand new. A cooperation agreement for this was signed by Werner



A significant international impact

M. Dornscheidt, the CEO of Messe Düsseldorf, Tom Mitchell, the CEO of Messe Düsseldorf North America and Andrés López-Valderrama, the CEO of Corferias Bogota (organizer of MEDITECH) on the first day of MEDICA 2017. "Columbia is one of the markets experiencing the greatest growth in medical technology in Spanish-speaking Latin America. In terms of strategy, it is important that we show unity with them via MEDICAllianza", said Werner M. Dornscheidt, emphasizing the significance of this future engagement. The sales volume for the Columbian market for medical technology amounts to 1.3 billion US dollars and is expected to grow by at least 20% before 2019, with an import quota of 80% (Source: gtai).

Brand new and tried and tested - useful for visitors and exhibitors

To respond to the interests of our many international visitors as well as possible, the MEDICA programme had even more new event formats added to it this year - with highlights that were of international relevance whilst simultaneously addressing the traditional German professional visitors.

For example, the new conference, MEDICA ACADEMY, was a certified advanced training event for doctors from a wide range of disciplines. It received an excellent response from its participants. The seminar offered on "Handing Over Practices", to mention one among many, was met with great interest. The latest numbers from the National Association of Statutory Health Insurance Physicians (Kassenärztliche Bundesvereinigung) (Source: Arztmonitor 2016) proved that we have picked up on the hot topics here. According to these numbers, almost one in four practising doctors in Germany is planning to give up their practice within the next five years.

Currently, the topic of infection prevention is of importance to both national and international audiences. Infection prevention was a focal point in the MEDICA ACADEMY seminars that was remarked upon and noted by many, and the same applied for the new MEDICA LAB-MED FORUM. From the various viewpoints of the different outpatient and inpatient medical professional target groups, the questions that were important to them were addressed - from facets of travel medicine and worldwide migration to interdisciplinary cooperative work to fight against the increase in resistance and multi-resistance with sufficient hygiene measures and therapies that comply with the guidelines.

The forums integrated into the trade fair and their accompanying conferences, such as the established MEDICA MEDICINE + SPORTS CONFERENCE for sports and preventative medicine, or the international military and disaster medical conference DiMiMED, among others, have also aided the exhibitors to find the right target groups for them, and this has been demonstrated by the example set by Oehm und Rehbin GmbH. Over the past years, they have used the industry sessions at the DiMiMED conference to present their hardware and software solutions for mobile medical imaging. They have been taking part in MEDICA as an exhibitor since 2016. "The international scope of MEDICA is crucial for us - it's the ideal context to show the vast range of our products" explained Bernd Ohm, the CEO. For this company, being able to speak closely with doctors, technical universities and engineers is an important component of their innovation strategy.

Digitalisation and dematerialization for smart processes

To sum up the discussions from the other well-attended themed forums which were integrated into MEDICA, for example the MEDICA HEALTH IT FORUM or the MEDICA CONNECTED HEALTHCARE FORUM, as well as the innovative products presented by the exhibitors, we can state the following: Digitalization is penetrating all sectors of medical care, and this is a trend that is here to stay. Economic feasibility and easy handling of medical technology devices and products are top priorities in terms of ensuring sales. Any applications that make relevant information available at the point of care as quickly and easily as possible are in very high demand. Mobile computing programs on tablets and smartphones are examples of this, along with their apps. This leads us onto another trend: dematerialization. With more and more systems, devices and products, innovation is overwhelmingly based around new software solutions and less on hardware. This equipment is also becoming more compact and lighter, without any reduction in performance. An ultrasound system consisting solely of a combination of the transducer, a smartphone and an app was one of the product highlights at MEDICA 2017. Thanks to innovative development of the transducer, ultrasound-to-go has become an option even in cardiology, one of the most demanding disciplines.

Wearables also proved to be particularly smart. Many innovations in this sector were presented for a variety of fields of application at MEDICA 2017, for example for diabetes or cardiac disease through to optimal wound care (via intelligent plasters). Humotion, a German

start-up, used its presence at the new MEDICA START-UP PARK (in Hall 15) to present a new sensor system which is integrated into fabric. This enables a patient's entire movement dynamic to be captured with great precision, which provides valuable information to doctors and therapists of people with orthopaedic issues or geriatric patients.

"A New Era for Hospitals"

Under the theme "A New Era for Hospitals", the 40th German Hospital Conference was dedicated to queries on health policy following the parliamentary elections, also covering digitalisation and clinical quality assurance among other topics. Over 2,000 participants attended this leading information and communication platform aimed at the directors and management of German hospitals. The event was accompanied by the European Hospital Conference (as it is every other year). The European Hospital Conference is a meeting point for the top decision makers from hospitals throughout Europe. Here, the eHealth Action Plan 2012-2020 from the European Commission was a topic that aroused much interest and was avidly followed.

COMPAMED: Tiny components are the next big thing!

Held alongside MEDICA, COMPAMED (in Halls 8a and 8b) reinforced its reputation as a top international event for the supplier market in medical manufacturing, clocking up almost 800 exhibitors from 35 countries. The companies and research institutes came to Halls 8a and 8b and showcased their high-tech solutions, thus presenting themselves as skilled partners for development and production in the medical technology industry. This year, miniaturized components constituted a popular topic. These are needed as they are used as components in wearables or implants (e.g. sensors, rechargeable batteries and RFID technology), to give an example.

**12th - 15th November 2018:
MEDICA + COMPAMED 2018,
Duesseldorf (D)**

Messe Düsseldorf GmbH
D 40001 Düsseldorf

The smallest components – medical technology requires smart solutions – are still rapidly advancing



Suppliers presented themselves from their best side again at COMPAMED 2017

A total of 780 exhibitors from 35 countries, even greater international participation and almost 20,000 trade visitors – COMPAMED, the leading trade fair for suppliers of medical technology products and services that is always staged in parallel to the world's largest medical trade fair, i.e. MEDICA (more than 5,100 exhibitors from 66 countries, which in 2017 ran from 13 to 16 November) maintains its heading towards success. The fact that the supplier sector for the medical technology industry remains optimistic about growth is without a doubt a contributor to its success. Digitisation and miniaturisation are currently the most important drivers that are pushing progress in micro-technology as well as other areas rapidly forwards. “The demand for smart miniaturised components destined for use in medical products and efficient high-precision production processes is still rapidly increasing,” says the IVAM, the Professional Association for Microtechnology. The association, which serves an international product market, attends the fair every year; its motto for COMPAMED 2017 was ‘Hightech for Medical Devices’. The specialists for small parts see micro-technology, nano-technology, photonics, MEMS (microsystem technology) and new materials as key technologies.

These ‘keys’ are also the focus of HNP Mikrosysteme (HNPM), which specialises in so-called micro annular gear pumps for microfluidics that are able to dose small and smallest quantities of liquid with the utmost of precision. The company presented its ‘mzr Touch Control’, which offers a new type of graphic control for pumps, at COMPAMED. The compact units for controlling individual pumps come with a simple and intuitive interface. The combination of touch control and pump enables users to set dosages from 0.25 micro litres and pumping quantities that range from between one micro litre and 288 millilitres per minute. Micro annular gear pumps are miniaturised rotary displacement pumps with internal motors that possess external gears and external rotors with internal gears. “These eccentrically-mounted rotors form a system of several conveyor chambers that remain sealed at all points in time during the rotational movement. They are used in medical technology particularly for diagnostics, e.g. for analysing blood samples,” explained Dr Dorothee Runge, who is responsible for Technical Sales at HNPM’s Life Sciences Division.

Smart ‘peas’ that can be sterilised

The Fraunhofer Institute for Electronic Nanosystems (ENAS) is also pursuing the trend towards miniaturisation. The institute travelled to COMPAMED 2017 with its ‘Sens-o-Spheres’ project, which has been developed in conjunction with the Bioprocess Engineering Faculty at the Technical University of Dresden and industrial partners. ‘Sens-o-Spheres’ are pea-sized sensors that are around eight millimetres in diameter and that are used to monitor bio-reactor processes in the millilitre to litre range. Using the currently smallest sensors in the world, they move freely within the reaction volume and so supply continuous measurements from all areas of the reactor. “We can also deploy several spheres at the same time and so utilise many wirelessly transmitted measurements,” said Tobias Lüke, a scientist at the ENAS. The clever sterilisable ‘peas’ have been designed to help improve and develop processes in the pharmaceuticals and life-sciences industries. They can be recharged overnight.

Learning to walk again thanks to shoe insoles with pressure sensors

ENAS’ colleagues from the Fraunhofer Institute for Silicon Technology (ISIT) are working on entirely different applications for their sensors. Their sensors are used to measure the distribution of pressure in shoe insoles and so map gait and walking profiles. The data is sent via Bluetooth to a PC or smartphone and then processed there acoustically or visually. “By analysing gaits and using acoustic signals while doing so, it is our aim to help people doing sports during their free time prevent injuries, rehabilitate better and improve their results,” says Lars Blohm, a scientist carrying out research into bio-sensor technology and system integration at ISIT. Developments have been assisted by the Institute for Sports Medicine in Hamburg; other approaches include the measurement of moisture and temperatures.

Beutter, a manufacturer of high-quality precision components, possesses special skills in the manufacture of precision-engineered components with tight tolerances. The company makes individual parts and assemblies for technical medical instruments, prostheses and implants up to the highest Risk Class III category. “We manufacture small batches of sophisticated parts in quantities ranging between 50 and 1,000 units and have all the machining production processes, such as turning, milling, grinding and honing that are required to do so, available to us in-house,” says Dr Wolf-Dieter Kiessling, Managing-Shareholder at Beutter. The company just recently developed a medical port, i.e. a permanent subcutaneous interface to the bloodstream, for one of its customers. It consists of a titanium ring and a silicone membrane that can be punctured up to 1,000 times. Beutter offers special skills in handling and combining materials that are very difficult to work with and that are very demanding in regard to biocompatibility and fatigue-resistance, particularly when in contact with tissue.

Metals, alloys and particularly plastics are materials that are important to the manufacture of products destined for the medical technology sector. The demands being placed on systems and assemblies made from polymers continue to increase steadily. Riegler, a



Suppliers presented themselves from their best side again at COMPAMED 2017

plastics-processing company, has been meeting these demands for more than 30 years and is currently manufacturing moulded parts that weigh only between 0.007 and 800 grams. It draws on state-of-the-art manufacturing processes to do so: „We are currently actively pursuing the trend towards 3D printing and have presented our first prototypes to customers. We are not only focusing on printing components, we are also concentrating particularly on the printing of tools,” says Dr Thomas Jakob, Head of the Medical Technology Business Unit at Riegler. Our activities have also enabled us to realise prototypes quickly and cost-effectively.

Danish suppliers with own joint stand

Danish suppliers to the medical equipment industry also travelled to COMPAMED to exhibit state-of-the-art manufacturing and component technologies in Düsseldorf at their joint stand. “The industry for medical equipment is currently experiencing fundamental changes across the globe whereby cost reduction and outsourcing are the order of the day and continual innovation is consequently a vital necessity,” says Thomas Andersen, Head of the Danish Health Tech Group. Knudsen Plast A/S, for example, has specialised in injection-moulding processes for plastics that are destined for use in the health sector. According to Frederic Bernard, Head of Business Development at Knudsen Plast A/S, medical-equipment companies are increasingly outsourcing their injection-moulding requirements as well as the production of injection-moulding tools along with the associated process development and testing activities and as a consequence are looking to their suppliers to provide the necessary skills and capabilities. Knudsen Plast’s testing and product start-up centre in Denmark allows medical-equipment manufacturers to fully test and document their production lines for their products before manufacturing commences in Denmark or Knudsen’s plant in Slovakia.

Glass technology for diagnostic applications

Neither metal nor plastics: The name of Schott is very closely associated with the material of glass. The company has bundled its activities in the medical-technology sector under the heading of diagnostics. The new D 263 glass substrate that Schott supplies, for instance, constitutes a high-quality solution for optical diagnostics and biotechnology. Microfluidic components that are, for example, needed to sequence genomes and carry out pharmaceutical research are very demanding where optical requirements are concerned. Schott’s new glass substrate is ideal for meeting these requirements: It offers certified biocompatibility and very low autofluorescence so that there is no interference with fluorescent markers.

A whole lab in your pocket

The Fraunhofer Institute of Applied Optics and Precision Engineering (IOF) has developed a whole pocket-sized lab that may in future be used to quickly and easily locate disease indicators in the bloodstream – and to do so at patients’ homes. The lab will do away with the need for specialist physicians, all that it requires is a disposable fluorescence chip and a smartphone. The IOF scientists’ vision is for an app to read out the results within just a few minutes of a drop of blood being applied to the chip. The industrially manufactured chips possess small channels that the IOF is populating with the necessary optical systems. “We can print a lamp and photo detector on the component – and can do so using a conventional ink-jet printer that has been only slightly modified,” says Falk Kemper, Scientist with the IOF, explaining the simple manufacturing process. The trick here: The use of special inks that have been populated with fluore-

scent molecules and nano particles. The method’s principles: Special anchor molecules and fluorescent inks are located in the channels. Only the corresponding disease markers and the anchors will fit on a chip that has, for instance, been designed to confirm the presence of celiac disease (gluten intolerance) – all other molecules will be washed away. The fluorescent dyes additionally attach themselves to the structure that the anchors and markers create and will only fit on this one combination. The printed lamp will stimulate the dye and cause it to light up. So if the photo detector then ‘sees’ the light, this will indicate the marker’s presence thus allowing the conclusion to be drawn that the person concerned suffers from a gluten intolerance. “This method of ink-jet printing provides us with a process for quickly and cost-effectively manufacturing fluorescence sensors while also helping to reduce the consumption of materials and resources as a result of the fact that the material is only applied specifically to where it is needed,” says Kemper summarising all the benefits. The next step will be to develop applications for other disease markers.

Nano coating reduces friction in seals

Trelleborg Sealing Solutions is one of the world’s leading suppliers of precision seals. Among other things, the company presented its new method of coating for elastomers in Düsseldorf. The layers that this method creates are just a few hundred nanometres thin. This significantly reduces the otherwise high friction coefficients for elastomers while considerably improving the underlying material’s gliding properties. The new coatings therefore help simplify the installation of sealing systems while improving the quality and extending the service lives of technical medical devices. Trelleborg has used the process it has developed to apply nanoscale coatings to further reduce the thickness of layers that have been possible to date by a factor of between 10 and 50 over conventional coating systems. And, because the new application is very stable, it can also withstand sterilisation by gamma rays, ethylene oxide and superheated steam. “Our coating process enables us to apply a wafer-thin coating to classic O-rings and complex moulded components that moves within the nanoscale range. The elastomers’ original properties are only changed to a negligible extent and the lifespans of the sealing systems are increased as a result of friction reduction during dynamic processes,” says Andreas Schmiedel, Technical Manager Healthcare and Medical Europe at Trelleborg Sealing Solutions.

Packaging as high-tech solutions for medical technology

Packaging remains a permanent fixture at COMPAMED because it is an area that is of particular significance to the medical sector. The Multivac company, for instance, presented its solutions for, among other things, the automatic feeding of prefilled glass and plastic syringes, handling modules and carrier systems. The automation components are able to fill up to 3,000 syringes a minute into the packaging wells – and do so in a reliable and controlled fashion. All modules are synchronised with the thermoforming packaging machines and can be comfortably controlled via the operating terminal. Multivac’s broad range includes a variety of straps, carrier and feed systems that may be individually customised on the basis of the product to be packaged. Needles and plungers that are supplied in bulk can, for example, be separated by vibration containers and centrifuges and fed to the packaging machine or machines. Robots are then able to finally insert the syringes, bags, ampoules and vials into their intended packaging wells.

Other companies such as Xenon have dedicated themselves to the topic of automation. The company specialises in the development and manufacturing of special machines for, among other things, technical

Suppliers presented themselves from their best side again at COMPAMED 2017

medical products. These machines are usually designed to handle up to 500,000 units and more in mass production. The Dresden-based business attended COMPAMED 2017 to present a new dosing module that is able to apply a broad range of materials to different components. "We are concerned here with bubble-free gluing and casting – processes that are also playing an increasingly important role in medical technology," says Peter Hammer, Head of Medical Sales and Business Development. Xenon has developed a patented procedure in which a dosing needle that may be used with adhesive, for example, that can travel along any desired route within a vacuum chamber. "The special aspect here is that we are able to build very small chambers. As a consequence, it is possible to create vacuums very quickly ... within just 0.8 seconds, for instance ... and keep cycle times short," Hammer explains.

Drives that are able to control positions within the nanometre range

The Faulhaber company's motor that is fitted in the bionic hand prosthesis by ottobock to move a finger weighs just 11 grams. A total of five motors with gears make it possible to execute 14 different gripping patterns. Drive technologies are also a firm part of

COMPAMED's programme – as is the company of Dr. Fritz Faulhaber. The company is now able to offer a broad range of solutions for analysis as well as automatic equipment for technical laboratory systems. Ultra-high-precision motors are also available for adjusting optical equipment, mirrors and lasers: "They allow us to position components in the nanometre range," says Frank Maier, Applications Consultant at Faulhaber. But suitable measuring systems are needed before machines can be positioned this precisely. "That's why we also supply integrated systems, i.e. comprehensive solutions," says Maier. Faulhaber may consequently be regarded as an example of the trends that have been apparent at COMPAMED for many years: Ever smaller, increasingly compact, increasingly functional. And this is precisely the direction that COMPAMED 2018 in Düsseldorf (12 to 15 November) will probably be taking.

**12th - 15th Nov. 2018: MEDICA + COMPAMED 2018,
Duesseldorf (D)**

Messe Düsseldorf GmbH
D 40001 Düsseldorf

Clear growth in machinery segment, beverage technology strongly represented, packaging media further expanded

upakovka 2018

Renowned Exhibitors and Extensive Programme of Side Events



A very positive exhibitor response can already be seen for upakovka 2018 to be held at the AO Expocentre Krasnaja Presnja in Moscow from 23 to 26 January. The German participation is again bigger than in previous years and the Italian pavilion will also house more companies than at the past upakovka. Alongside high-calibre German exhibitors such as Kronen, KHS, Rovema, Theegarten-Pactec and Jockey, OMAG, G. Mondini and the Aetna Group will be representing Italy. Add to this other members of the Italian Machinery Manufacturers' Association UCIMA, which also features among the exhibitors and now officially supports upakovka. Russian companies are also very well represented at the event in Moscow. They include Danaflex, a leading Russian supplier of flexible packaging films as well as numerous companies from the beverage segment such as Stanco LLC, AFR OOO and PET-FORMAT, to name but a few.

"The second edition of upakovka held under the interpack alliance umbrella brand has already made clear, that this trade fair benefits from the expertise and network of interpack as the international No. 1 trade fair in the industry – and this despite the current rather difficult political framework in Russia," says Bernd Jablonowski, Global Portfolio Director Processing & Packaging at Messe Düsseldorf.

At the last upakovka, held under the umbrella of the interpack alliance for the first time, the special themes innovationparc and SAVE FOOD celebrated widely acclaimed premieres. Visitors can once again expect an extensive innovationparc conference programme over the entire duration of the trade fair in 2018. On 23 January, the first day of the trade fair, a slot is reserved for SAVE FOOD. This will address various issues including shelf life extended by smart packaging (technology). The following day Industry 4.0 will play a pivotal

role. The German Engineering Association VDMA will deal with the challenges and knowledge available for this trendy theme that also attracted plenty of attention at the previous interpack in Düsseldorf. The second to last day of the trade fair will revolve around flexible packaging – first with a lecture by Flexible Packaging Europe (FPE) on current trends followed by a slot presenting "Digital Innovations for Packaging and Labelling" organised by Danaflex and the magazine publish. On the last day of the trade fair, some of the problems of professional training in the packaging industry will be discussed.

In addition to the innovationparc programme, the Nissa Group will organise a one-day event on 24 January where visitors can find out about what Hewlett Packard has to offer to the packaging industry. This event will predominantly be in Russian.

Just under 850 companies in total will be exhibiting at upakovka and the concurrently held interplastica – International Trade Fair Plastics and Rubber. upakovka will again be held in the Forum Hall, one of the biggest at the exhibition centre. This means that visitors will again find the complete ranges for the packaging industry and related process industries pooled under one roof. Visitors can now pre-register for upakovka free of charge at www.upakovka-tradefair.com/registration.

23rd - 26th January 2018: upakovka 2018, Moskau (R)

Messe Düsseldorf GmbH
D 40001 Düsseldorf

Around 10,000 visitors at **pacprocess India, IndiaPack, FoodPex India** and the parallel event **drink technology India** – exhibitors highly satisfied.

Successful première of Indian trade fair quartet



The combination of several trade fairs – the interpack alliance events pacprocess India, IndiaPack and FoodPex India and the parallel trade fair drink technology India, held by Messe München – can look back to a much acclaimed première in New Delhi. Companies responded well to the concept of trade fairs supplementing one another from the packaging sector and the processing industry (interpack alliance trade fairs) together with the areas of beverage technology, dairy and liquid food (drink technology India, held by Messe Munich). There was also a good response to the new venue, New Delhi, alongside the main venue, Mumbai. In all, from 26 to 28 October, 212 exhibitors occupied around 11,000 square metres of exhibition space and attracted 9,699 trade visitors to the Pragati Maidan Exhibition Centre. In addition, 600 delegates visited the simultaneous International Summit for the Packaging Industry (ISPI), held by the Indian Institute of Packaging (IIP). This year's conference, which was completely booked out, ran under a motto intended to reflect the significance of the packaging industry for economic growth in India: "Packaging – the Growth Driver".

"Our aim is to continually expand the leading role of our events for the Indian industry. Membership of the interpack alliance is considered to be a special seal of approval and therefore as something that warrants a clear increase in quality. The première of this new constellation of trade fairs showed that this approach was accepted extremely well," says Bernd Jablonowski, Global Portfolio Director Messe Düsseldorf.

Under its partnership with the IIP, Messe Düsseldorf and its Indian subsidiary handled the strategy, planning and implementation of pacprocess India, IndiaPack and FoodPex India and also the national and international marketing of those trade fairs.

While pacprocess India was a new event in 2017, IndiaPack and the ISPI Conference were considered to be well established on the Indian market. Many exhibitors were full of praise about the partnership between Messe Düsseldorf and the IIP and were also very satisfied with the outcome of the trade fair. It apparently exceeded their expectations. This was also the conclusion reached by Rakesh Sharma from Apoorva Valves, an Indian distributor serving a range of international companies: "It was a very good show, which we really enjoyed. Lots of visitors came to see our technical products from Germany, the US and other parts of the world."

Moreover, there was positive feedback on New Delhi as a venue: "We are very happy that Messe Düsseldorf gave us an opportunity to showcase our technologies which we want to bring to India. I am also happy that you have started a show in New Delhi as there are not many big shows," says Kapil Sharma, Norden/Citus Kalix (coesia companies), Business Head Tube Filling & Cartoning India & SAARC Region.

pacprocess India, IndiaPack and FoodPex India are held once a

year in combination with drink technology India (run by Messe München). Being held under a single roof, the four trade fairs map the thematic areas of packaging and related processes (PacProcess India), packaging materials and equipment as well as machinery and technology for the production of packaging equipment (IndiaPack), food and confectionery processing and packaging (FoodPex India) and also beverage technology, dairy and liquid food and the related packaging industry (drink technology India). Moreover, these trade fairs have a leading role in the region. Following New Delhi in 2017, next year's venue in autumn will be Mumbai. Every other year this urban hub on the Arabian Sea is a fixture for the trade fair quartet, while the venue varies between other Indian regions in the intervening years.

In 2018, following a recent cooperation agreement between the interpack alliance and the Italian mechanical engineering association UCIMA, the latter will give its support for the marketing of Messe Düsseldorf's Indian event by attracting visitors and organising an Italian joint stand. National pavilions at this year's trade fair quartet came from Germany, China and Taiwan. In addition, there were also international brands from Italy, Turkey, the United States, Belgium, Slovenia and Switzerland.

**24th - 26th October 2018: pacprocess indiapack 2018,
Mumbai (Indien)**

Messe Düsseldorf GmbH
D 40001 Düsseldorf

Impressum:

cleanroom online / W.A. Schuster GmbH · Mozartstrasse 45 · D 70180 Stuttgart · Tel. +49 711 9 64 03 50 · Fax +49 711 9 64 03 66
info@reinraum.de · www.cleanroom-online.de · GF Dipl.-Designer Reinhold Schuster · Stgt, HRB 14111 · VAT DE 147811997

Original texts and images

The contributions mentioned by name are the responsibility of the particular author. Reprinting, also of extracts, are permitted only with the approval of the editor and with reference to the source. The publisher does not accept any responsibility for unsolicited manuscripts and illustrations. The publisher is granted the exclusive, spatial, temporal and contentual limited right to freely use the article in unchanged or edited form for all purposes as often as desired or to transfer it to third parties for use. This right of use relates to print and electric media (Internet, databases, data carriers of all kinds).