



Hans J. Michael GmbH

**MT-Messtechnik**



Jenoptik triples clean room space at its Jupiter, Florida location to address increased global demand for optical systems.

## Jenoptik further expands manufacturing capacity with a new class 5 clean room



Class 5 Cleanroom, Jupiter, Florida USA (Photograph: Ryan Mudge) (© Copyrights: JENOPTIK Optical Systems, LLC)

Jenoptik Optical Systems, LLC, a leading worldwide supplier of high performance optical solutions, announces the expansion of its manufacturing operations in Florida. Jenoptik opened a new ISO 14644 Class 5 clean room with state-of-the-art filtration technology for high-precision optical assemblies to support applications with demanding cleanliness requirements like semiconductor and space flight instrumentation. Additionally, Jenoptik has extended site capabilities by investing in a new thermal vacuum chamber in the clean room. The Class 5 clean room complements the pre-existing ISO 14644 Class 7 clean room and triples the amount of clean room space in Florida.

Jenoptik's continued expansion in Florida is the direct result of customer volume requirements for the company's products. This new facility complements the clean room capacity in Huntsville, Alabama. The Huntsville facility is purpose-built to meet the rig-

orous requirements of leading-edge semiconductor-related manufacturing activities.

Jay Kumler, President of Jenoptik Optical Systems in North America, commented, „We are investing in differentiating technologies, advanced equipment and employees, and we are committed to meeting our customers' expectations for higher levels of cleanliness and contamination control.”

Leading equipment manufacturers around the globe rely on Jenoptik's products to build semiconductor devices, telecommunications equipment, digital projection, mobile devices, augmented reality, industrial automation and connected vehicles. Our optical systems are helping lead the digital transformation and internet of things.

JENOPTIK Optical Systems GmbH  
D 07745 Jena

The modular transfer system from Bosch Rexroth covers a wide range of sectors and applications

# ActiveMover with linear motor for quick planning

Using the software MTpro for planning and designing assembly technology systems, Bosch Rexroth is simplifying the planning process for ActiveMover, a highly dynamic transfer system based on linear motors. ActiveMover unlocks the potential to increase productivity with the same flexibility for small batch sizes, thanks to the quick and precise positioning of the workpiece pallet.

With the software MTpro from Rexroth, users can assemble their made-to-measure ActiveMover built from straight and curved sections with a vertical-mounted linear motor, without any knowledge of CAD. Simply click on the corresponding module in the configuration interface and it merges into a closed oval in the desired dimensions. Moreover, order lists including all accessories will be issued automatically. The user can export the fully configured ActiveMover in different kind of CAD systems.

With ActiveMover, the user can individually control any number of workpiece pallets and freely program them in the direction of travel, acceleration and target position. The workpiece pallets approach the target position with a repeat accuracy of +/- 0.01 mm. Using direct drive technology, they accelerate in a highly dynamic manner with up to 4 g and therefore shortens cycle times. Users can also install very gentle sequences of movements to bring loosely mounted assemblies safely to the next station. An integrated collision assistant prevents accidental collisions. Available in two versions, the transfer system covers the transport of workpieces weighing up to 10 kg.

The transfer system fits into various automation environments with a broad range of communication protocols such as PROFI-

NET, Ethernet IP and EtherCat. Predefined function blocks for common controls accelerate commissioning and increase the flexibility required for fast conversions.

The combination of precision, dynamics and flexibility meets the requirements in a wide range of sectors. ActiveMover is already being used by numerous customers from the automotive industry as well as in cleanrooms in electrical/electronics production and in healthcare applications. You can

use practically all process steps imaginable, from filling, assembly, pressing and fastening to coordinated testing processes. After completion of the series start-up, in which Bosch Rexroth exclusively delivered pre-assembled modules, users can now order the ActiveMover in quickly-available individual components.

Bosch Rexroth AG  
D 97816 Lohr am Main



It is already in use in numerous sectors: highly productive transfer system for practically all tasks imaginable.



Dear subscribers,

the importance of cleanroom environments is constantly rising and will in the future. This is the result of a university survey done by three students of Hochschule Albstadt-Sigmaringen. What a pity that many of the surveyed companies were not really communicative. For what reason?

We, on the other hand, received really a lot of exciting news concerning the cleanroom industry in the last weeks and we have put the most interesting bits together for you here in this newsletter. Maybe you want to take a break, have a cup of tea and some Christmas cookies and browse through this newsletter. You will certainly find your bit.

I wish you a wonderful holiday season and a happy new year.

Yours sincerely,

Reinhold Schuster

## Simultaneously lubricating, cooling and cleaning with CO<sub>2</sub>snow

# Marked increase in productivity of machining

By using CO<sub>2</sub> as a process coolant, the cost-efficiency of machining can be significantly improved. With its quattroClean system, acp has developed a solution suitable for use in serial productions. Among other things, it increases productivity by around a third when machining workpieces made from PEEK and aluminum. A further advantage is that components and machines stay much cleaner.

In recent years, the use of CO<sub>2</sub> as a coolant for machining processes has become much more popular as an alternative to conventional cooling lubricant concepts. One of the reasons for this is the higher rate of material removal, which increases productivity and also reduces tool wear and the associated downtimes. The so-called cryogenic cooling method with carbon dioxide therefore decreases production costs. With its quattroClean snow jet technology, acp – advanced clean production GmbH offers a cooling system that has proved its worth in serial productions. It can also be integrated into CNC machines and machining centers at a later stage.

### Reliable cooling thanks to non-wearing circular two-component nozzle

The quattroClean system works with liquid carbon dioxide, which is generated as a by-product from chemical processes as well as from the generation of energy from biomass, thus making it environmentally neutral. It is transported at room temperature to the non-wearing circular two-component nozzle. The CO<sub>2</sub> only transforms from a liquid to a solid state in the form of fine snow crystals as it leaves the nozzle. The crystals are then bundled by a circular jacketed jet of compressed air and advanced to the process zone at supersonic speed. The temperature of the medium at this point can be as low as 78 °C. On the one hand, the patented technology with the jacketed jet ensures a constant pressure and consistently good cooling results. On the other hand, only the quantity of carbon dioxide needed for the desired cooling effect is supplied.

### Dry, residue-free machining

The fact that solid-state carbon dioxide sublimates at room temperature makes this a dry process. Consequently, chips are clean and dry as well as fully recyclable. Dry machining also means that workpieces and machines stay much cleaner. In many cases, there is no further need to clean workpieces after processing. Depending on cleaning requirements, a cleaning module can be integrated quickly and efficiently downstream of the machining process. A further advantage of cooling with CO<sub>2</sub> is that parts, for example for medical

products, are machined free of contamination. The low temperature also minimizes the risk of a workpiece deforming. Finally, no costs are incurred either for maintenance, care or the disposal of cooling lubricants.

### External cooling prevents icing up and facilitates retrofitting

In contrast with other solutions, cooling takes place externally with the quattroClean system rather than through the tool. The non-abrasive and non-toxic jet of snow and compressed air is easy to focus and can be directed exactly where it is needed in the defined process zone around the cutting edge, chips and tool. For this, the CO<sub>2</sub> nozzle “travels” with the tool.

Among other applications, the quattroClean system is used in serial productions to lubricate, cool and simultaneously clean machined implants and medical components made from PEEK. Another serial application is in metal processing.

Here, the system is used to cool tools when machining parts made from aluminum. In both cases, productivity could be stepped up by over thirty percent by cooling with CO<sub>2</sub> externally using the acp system.

### Compact and targeted control

Thanks to its modular concept, the quattroClean system from acp can be easily adapted to customer demands and has a very small footprint. Process parameters, such as the volume flow for compressed air, or the quantity of carbon dioxide required, can be optimally adjusted to the application concerned.

The duration of the jet for both process parameters can also be modified separately. This high degree of flexibility enables the system to be used for completely new applications, as well as for applications which were unsuccessful with standard systems.

acp – advanced clean production GmbH  
D 71254 Ditzingen



The quattroClean system is also used to simultaneously lubricate, cool and clean machined implants and medical components made from PEEK. This increased productivity by over a third.



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Expansion within the Asian market with the new Group company in India and the new sales company in Taiwan

# Weidmüller expanding global presence in growth markets

The Weidmüller Group, an international market leader in industrial connectivity and automation headquartered in Germany, is continuing to invest in its global presence in key growth markets. One month after the takeover of the W Interconnections Group by Rockwell Automation Inc. in the US, Canada and Mexico, the electrical engineering specialist founded a new Group company in Bangalore, India, which commenced operations on 1 November. The subsidiary comprises a 3,000-m2 warehouse and logistics centre and will provide on-site support to the Sales, Marketing and Training areas as well as to all related services. „By investing in the new Group company, we are improving our global presence in what will be one of the most important growth markets in the next few years as well as further increasing our proximity to our customers in this part of the world,“ states Weidmüller Chief Marketing and Sales Officer José Carlos Álvarez Tobar.

Weidmüller founded the subsidiary Weidmüller Electronics India Pvt Ltd in India back in 2009, which then went on to pool all of the local sales activities. „After successfully establishing the sales office, the next logical step was to found a Group company within the region to ensure that we have a better presence on the market,“ explains Álvarez. The Group company currently employs 20 people.

On 16 October, Weidmüller took another important step forwards in its expansion within the Asian market by opening a new sales office in Taiwan with the aim of generating additional revenue in the Asia region. „As we have a subsidiary providing support to the Taiwanese market, we are now able to react better to the individual



Representatives of the Weidmüller Group from Detmold and China mark the opening of the new subsidiary in Taiwan with a special ceremony.

requirements of our customers from this market and significantly improve the personal contact with our customers and partners,“ clarifies Lance Zhao, Regional Sales Manager for the Weidmüller Group in Asia.

Weidmüller GmbH & Co. KG  
D 32758 Detmold

SKAN Japan celebrates expansion in Okinawa

## Grand Opening - SKAN Japan

On the 19th and 20th of October SKAN Japan celebrated its expansion at the new site right next to the ocean in Okinawa. Besides SKAN employees, more than 60 customers and guests from partner companies attended the event. After an opening speech from Koji Ushioda, President SKAN Japan and the SKAN CEO Thomas Huber, the guests enjoyed good food and a beautiful performance program in the open air. Children from a local group came along for a dance and drum performance followed by spectacular Karate demonstrations.

Due to its growth SKAN Japan had moved into a bigger building at the end of 2016. The SKAN staff is very excited about this new modern building and the beautiful location with sea view.

SKAN founded in 1968, is one of the pioneer companies in the field of cleanroom equipment and isolator design for the global

pharmaceutical industry. Innovative products, customer-specific solutions and an efficient service organisation have led SKAN to become a global market leader and impor-

tant partner for industry and research laboratories.

SKAN AG CH 4123 Allschwil



DSM Sinochem Pharmaceuticals (DSP) announces its full readiness to onboard its customers and partners in regards to the upcoming global legislation on serialization, aiming to reduce counterfeiting of prescription drugs by tracking and tracing the passage of prescription drugs through the entire supply chain. Preceded by the USA and Russia, the new legislation will be effective in Europe from February 2019. With this status, DSP is one of the frontrunners in serialization in the European generics pharmaceutical industry and aims to have its full supply chain onboarded and ready before year's end 2018.

## DSM Sinochem Pharmaceuticals ready for full support of customers and partners implementing serialization, a tracking and tracing system to reduce prescription drugs counterfeiting

### Solution for counterfeit drugs

Fueled by online sales, unsecured physical and cyber global supply chains and minimal punishments, counterfeit prescription drugs have become an exploding industry. According to the WHO up to 15% of all medicines circulating in the developed countries and 30 - 40% in developing countries, are falsified. The effects of these counterfeit drugs cause major threats to both human health as well as the reputation of pharmaceutical brands.

Product serialization is the global answer against counterfeit drugs and drug adulteration, and should significantly reduce the production and distribution of falsified drugs. The tracking and tracing system of serialization can identify drug products by a unique serial number next to their origin, shelf life and batch number, and allows tracing of the product lifecycle from production, distribution to the end-user.

### Comprehensive system

Serialization requires all partners in the supply chain to implement a multitude of comprehensive systems and processes. Next to the use of the unique serial number and tamper-evident per packaging, collaborative action from partners throughout the supply chain is needed for accurate recording, tracking and managing of data as the product moves from manufacturer, to the marketing authorization holder, to pharmacists and other dispensing points.

### Flexible solution

DSP is one of the first generics companies to be fully prepared to

help customers and partners to onboard on serialization, having implemented and thoroughly tested its flexible SAP-ATTP 2.0 solution in conjunction with Pharma Network. Frans Oostland, project manager Serialization for Drug Products at DSP said: "We have chosen our system for its unique capabilities and flexibility to communicate with every other system available on the market. The potential of our solution was recognized with a runner-up award during the recent Pharma TRACKTS! Conference on Serialization in Berlin."

### Full service to customers and supply chain partners

Implementing serialization proves to be a challenge to many. It is currently estimated that 40% of companies in the pharma supply chain will not be ready in time. Being a frontrunner in Europe, DSP offers an onboarding plan for its customers and supply chain partners as a service and business advantage.

Michael Hartmann, business unit director for Drug Products at DSP said: "We are now ready to help our customers and supply chain partners to implement serialization, and connect their systems to ours for optimal communication and seamless collaboration. In addition, we offer extra services in the serialization process, such as generating serial numbers on behalf of our marketing authorization holders. Our main goal with this is to fully unburden our clients in both preparation and the actual execution".

DSM Sinochem Pharmaceuticals Netherlands B.V.  
NL 2613 AX Delft

## Exhibitors close numerous deals at trade fair duo pacprocess Tehran and IPAP

The debut of the combined trade fairs pacprocess Tehran, as part of the interpack alliance, and IPAP Printing & Packaging Expo - powered by drupa, has markedly exceeded both exhibitors' and visitors' expectations and also prompted satisfied faces among the organisers Messe Düsseldorf and Barsaz Rooydad Pars Company (BRP). Some 7,500 experts were attracted to Iran's most state-of-the-art exhibition centre Shahr-e-Aftab (Exhibiran International) from 12 to 15 October, where 167 exhibitors from 11 countries presented their products and services. The ranges included exhibits from the entire value chain of the packaging industry and related process industries (pacprocess) as well as printing technologies from the areas of Prepress/Print, Premedia/Multichannel, Postpress, Converting and Packaging, Materials, Equipment, Services and Infrastructure (IPAP). The trade fairs

occupied 14,575 square metres of total exhibition space. Exhibitors included national companies such as Vana Press, Shargh Sanat and Kooshesh Karan Machinery as well as international enterprises like Canon Middle East, Di Mauro, and Project Engineering. Commenting on this Hamed Irani, Director BRP, said: "The importance of the print and packaging industries cannot be rated high enough. They lay the foundation for the competitiveness of a wide variety of products and are closely tied to rising export revenue. The trade fair concept of pacprocess Tehran and IPAP went down very well and has created the pre-requisites for a positive development in these key industries."

"The debut of pacprocess Tehran was a resounding success. I am confident that we can support even more interested companies in

## Exhibitors close numerous deals at trade fair duo pacprocess Tehran and IPAP

Iran with our expertise gained as part of the interpack alliance helping them to develop a high-potential market," says Bernd Jablonowski, Global Portfolio Director at Messe Düsseldorf.

pacprocess Tehran, which forms part of the interpack alliance, was supported by several international associations including the Italian Machinery Manufacturers' Association UCIMA, the cooperation partner for some interpack alliance trade fairs and exhibitors in Tehran. "The first edition of pacprocess Tehran has laid the foundation for further successful trade fairs. The quality and quantity of visitors exceeded our expectations. The same also applies to the number of exhibitors and quality of organisation. The meeting with local enterprises confirmed the avid interest in technology made in Italy, which will therefore also be on show at pacprocess Tehran next year," adds Gian Paolo Crasta, Marketing & Communication Manager, UCIMA. Italian exhibitors this year included such technology suppliers as the Cama Group and Pieri.

A special area called "iCarton" was realised in cooperation with the World Packaging Organisation (WPO) and the concurrently held IPAP Printing & Packaging Expo. It targeted producers of carton and corresponding packaging media. Acting as a local partner was the Iranian Cartons Packaging Manufacturer Association. Exhibitors included Hamkar Carton, Kalia Karton and Tabdil Machine, to name but three companies.

pacprocess was accompanied by a two-day innovationparc Forum programme, which was received well. The first day addressed themes related to the specificities of the Iranian market while the second day was all about the SAVE FOOD Initiative. VDMA's Food Processing and Packaging Machinery Association actively contributed to the

programme with content. This offering was complemented by very well-attended "island talks" delivered by some exhibitors on specific technology themes.

The involved associations not only gave good feedback on pacprocess Tehran but exhibitors also rated their participation as very positive – exhibitors such as Christian Scheck, Director of Sales and Marketing at Joma Kunststofftechnik: "We are very astonished about the positive feedback we received from interested parties. This was the first step into the Iranian market for us. We came without any big anticipations but return with high expectations. (...) If some of the things discussed here should materialise I am pretty confident that our company will be exhibiting again here next year."

The Turkish company Fitpak was also favourably impressed. "Although this was a premiere we were very satisfied. We met the key players here that I had tried to contact in vain for a year or so. Here they came to our stand," delights Yunus Berker Yetisi, Export Sales Representative, Fitpak. In addition to the good visitor response he also explicitly praised the pacprocess Tehran concept as an interpack alliance trade fair. Furthermore, he added, the exhibition centre had been a good choice.

A well educated, relatively young population of over 80 million people increasingly calls for high-quality packaged products that it is not possible to produce to a competitive standard using local companies' existing, technology. This puts great pressure on local producers to invest. This means big opportunities especially for European investors and partners as these are highly appreciated by Iranians.

Messe Düsseldorf GmbH D 40001 Düsseldorf

Patients prefer pharmaceutical packaging that does not give away its contents at first glance. With their oval shape, Gerresheimer's extremely handy Duma Pocket containers look more like boxes of sweeteners, chewing gum, or peppermints. The Duma Pocket is available in many different sizes and colors and with various closures. Gerresheimer is expanding its range of this tried-and-tested packaging with the addition of the 40 ml Duma Pocket CR Box and the 100 ml Duma Pocket CR 100 for large filling volumes.

## Duma Pocket – the pharmaceutical packaging that doesn't look like medicine

The 40 ml Duma Pocket CR Box has a child-resistant closure, which can be opened by applying moderate pressure to the sides of the box with one hand while opening the top with the other: a simple task for adults but not for tiny hands.

As the name suggests, the Duma Pocket CR 100 can hold up to 100 ml. It also boasts an ergonomic design, a simple dispensing system, a child-resistant closure, and mounted desiccant(s) stored in its base. These impressive features make it an ideal primary packing solution for all kinds of drugs that need to be taken every day.

### Lots of space for branding

The sides of all Duma Pockets are a perfect place for consumer information and offer plenty of room for distinctive brand designs, while the top area can be labeled individually for each client.

### Available in every color

The Duma Pocket containers can be produced in any color and can even be made translucent or transparent. They are injection-moulded under clean room conditions.

### High-speed filling

The Duma Pocket containers can be filled at high speed, packed without taking up much room, and stored with ease. Besides the two new Duma Pocket designs we have an existing Duma Pocket in 30 ml and 50 ml with a TE-function. All three designs can be extended to different sizes using the same base.



Gerresheimer AG  
D 40468 Düsseldorf

The new Gerresheimer Duma Pocket solutions  
in 40 and 100 ml.

Endress+Hauser prepares for further growth with a new building in Brussels

# Expansion in Belgium

The Endress+Hauser Group is celebrating another development: After expanding production and building a new plant in the US, plus opening new sales offices in Malaysia, France and Chile, the company has now dedicated a new facility in Brussels. Endress+Hauser invested approximately 6.6 million euros in the new building in Belgium's capital.

"The sales center has fortunately experienced encouragingly strong growth in recent years," said Johan Puimège, Managing Director of Endress+Hauser Belgium, at the opening ceremony in front of guests from business and politics, media representatives and employees. "The new building provides space for the company's further development and creates an inspiring meeting place for customers, employees and business partners."

The four-story, 3,600-square-meter building features a welcoming reception area, an experience-oriented exhibition zone, an attractive restaurant for visitors and employees, state-of-the-art conference rooms and offices as well as workshops including a calibration lab and a warehouse. It was erected in the immediate vicinity of the previous location of Endress+Hauser Belgium. The 10,000-square-meter site offers room for future expansion.

Endress+Hauser put an emphasis on an appealing architectural design and the use of quality materials. "People should feel comfortable at Endress+Hauser. Our aim was a communicative environment, in which we can work in a creative way for the benefit of our customers," underlined Johan Puimège. Geothermal systems and 175 solar panels provide a high degree of energy self-sufficiency. Endress+Hauser instruments monitor energy flows in the building and ensure efficient use.

## Leading position in IIoT

"Increasing digitalization opens up new opportunities with regards to process optimization and plant efficiency," said Matthias Altendorf, CEO of the Endress+Hauser Group. "Our sales center in Belgium plays a leading role when it comes to helping customers to increase their productivity, taking advantage of the Industrial Internet of Things."

From Endress+Hauser's new Brussels offices, around 80 employees support customers in Belgium and Luxembourg. Chemical, food & beverage, life sciences and water & wastewater are the main industries served by the sales center. In recent years, the services and automation solutions businesses have developed particularly well.



Endress+Hauser erected a new 3,600-square-meter building in Brussels to house Sales Center Belgium.



Inauguration of the new sales office in Belgium: Klaus Endress, Supervisory Board President of the Endress+Hauser Group, Marc Lambotte, CEO of the employers' association Agoria, Julien Meganck, CEO of the institute for regional development CityDev, Ivano Mazzoletti, Corporate Sales Director for Central Europe at Endress+Hauser, Johan Puimège, Managing Director of Endress+Hauser Belgium, Martine Raets, city councilor of the Brussels municipality of Evere, and Matthias Altendorf, CEO of the Endress+Hauser Group (from left), cut the ribbon.

Endress+Hauser AG  
CH 4153 Reinach BL 1

# Record performance, qualitatively and quantitatively

- 15th parts2clean bigger and better than ever

- Lead generation, sales talks and order signings powered by an upbeat mood

The 15th edition of the parts2clean show for industrial parts and surface cleaning was the biggest in its history, and also ranked among the best in terms of attendance. Held in Stuttgart, Germany, from 24 to 26 October, parts2clean 2017 featured 253 exhibitors from 16 nations. Its displays filled more than 7,300 square meters (78,500 sq. ft.) of space, making it the biggest parts2clean ever in terms of booked space. The end-of-show tally shows that parts2clean 2017 was also a major success in terms of attendance: Over its three-day run, parts2clean attracted some 4,900 trade visitors, i.e. nearly 20% more than for the comparable show in 2015. "These outstanding figures reflect the key importance of parts2clean for the industrial parts and surface cleaning industry," commented Olaf Daebler, Global Director for parts2clean at Deutsche Messe. "Something of at least equal importance was the dynamic, upbeat mood that prevailed throughout the show," he added.

The visitors came from a total of 41 countries and the share of attendees from abroad was 24% – an increase of 4 percentage points. After Germany, the top countries of visitor origin were Switzerland (16%) and Austria (12%), followed by France, Sweden and the Netherlands with 6% each. This broad international mix was reflected in the diversity of the contacts fielded by exhibitors. Here, for example, is what Detlef Lang, Technical Sales Optical Microscopy, Carl Zeiss Microscopy GmbH, said: "We encountered a lot of international visitors – people from countries like France, Austria, Hungary, Slovenia and Turkey. Most of them were here primarily in order to gather information, but there were also some with specific projects in mind who requested quotes right then and there." About a third of the visitors from abroad opted to spend two to three days at the show.

## Quality visitors with high degree of decision-making authority

The facts and figures only tell half of the story, the other half being the high level of exhibitor satisfaction generated by parts2clean's top-notch audience. 26% of all attendees were top-level executives, and another 27% were from managerial backgrounds. Moreover, a very pleasing 87% of the visitors were professionals who play a major role in their organizations' purchasing decisions. "81% of all parts2clean visitors come ready to invest," Daebler noted. "And about 80% of their planned expenditures are pegged for realization within 12 months of the end of the show. Furthermore, about half of the planned purchases are for volumes in excess of 100,000 euros."

For many exhibitors, this highly investment-ready audience translated into firm purchase orders signed right on site. Weber Ultrasonics AG is a case in point: "We presented our new ultrasound generator at parts2clean and attracted a great deal of interest on the part of customers and new prospects, alike," explains Sales Director Florian Weber. "As a result, we were able to bring two projects to a successful close right here at the show." Another company to successfully shake hands at parts2clean was acp – advanced clean production GmbH. CEO Hans-Jörg Wössner explains: "Throughout the three days of the show we found ourselves in constant dialogue with parties interested in implementing CO2 snow cleaning as an integral process in their production and assembly lines, thus testifying to the steady rise of this technology as an enabler for Industry 4.0. As a result, we generated a lot of high-caliber leads and fielded a lot of promising inquiries. Not only that, we also managed to sell a manual, turnkey cleaning system." Alberto Tromponi, President of Italian parts cleaning firm Cemastir Lavametalli srl, was likewise very happy with the outcome of the show. "We've been exhibiting at parts2clean



regularly for several years, and this year the show was excellent for us. We will definitely be back next year," he said. Joe. A. Kennedy, Vice President of UK firm Andritz Powerlase Ltd, has also already decided to exhibit at the next show: "This was our first time exhibiting at parts2clean, so, needless to say, we wanted our showcase to be a success. Well, I'm pleased to say our expectations were met in every respect. The show was professionally run and very well organized, and we made a number of valuable contacts; so, yes, we will be exhibiting again in 2018." In a similarly positive vein, Rainer Straub, Director Sales, Ecoclean GmbH (previously Dürr Ecoclean) had this to say: "We used this year's parts2clean to appear under our new Ecoclean Group brand while at the same time demonstrating to visitors that they can expect the same professionals, the same technology and the same great quality they have come to know and value. The response



## Record performance, qualitatively and quantitatively

was tremendous. Practically every visitor at our stand was there with specific particulate or film decontamination projects in mind.”

Virtually every conversation transitioned rapidly to in-depth, detailed business dialogue, due in large measure to the fact that an impressively high 99% of the show’s visitors were industry professionals. That’s the message from the exhibitors, including Heiko Barth, European OEM Manager at Houghton Deutschland GmbH: “We got talking with many highly promising prospects who had come to us in search of solutions to the real-world challenges they are facing. They were from a very wide range of industries and countries, and the talks we had with them were a goldmine of information. What’s more, all the big-name cleaning plant manufacturers are represented here, so for us as manufacturers of cleaning media, there were plenty of opportunities to initiate and grow key relationships.” The U.S.-based chemicals supplier Kyzen shares this positive impression of parts2clean’s value as a networking platform. Its Chief Product

Line Manager Industrial, Chuck Sexton, explains: “We’ve been exhibiting at parts2clean for 10 years. It’s the No. 1 event on our trade-show calendar, and it always delivers. We always manage to meet up with customers and prospects from around the world, and we value the opportunity to network and discuss specific projects face-to-face with our European cleaning plant partners.”

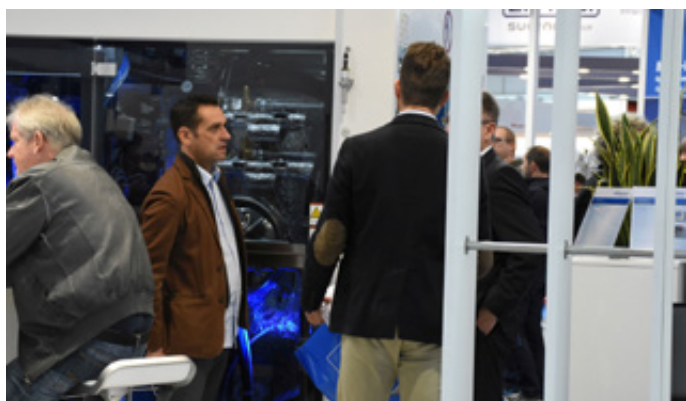
### Parts cleaning remains a growth area

This year’s international parts2clean trade fair for industrial parts and surface cleaning was attended by company representatives from a very diverse range of industries. The top industries of origin were mechanical engineering, chemical and process engineering, and surface finishing. The automotive industry also had a strong showing, holding steady at 32% of the total trade visitor turnout. 53% of the visitors surveyed feel that parts cleaning – and hence parts2clean as an information and procurement platform – is going to become increasingly important in their industries. This conviction was voiced by as many as 6% more attendees than at the previous parts2clean.

The growing importance of parts cleaning is not confined to the German-speaking world – a fact evident, among other things, in the strong interest among international visitors in the show’s English-language Guided Tours and in the simultaneously translated (German->English) presentations at the parts2clean forum.

**23rd - 25th Oct. 2018: parts2clean 2018, Stuttgart (D)**

Deutsche Messe AG  
D 30521 Hannover



## Company establishes its presence in South Korea

# Vetter expands its footprint in Asia Pacific region

- Additional footprint in Asia Pacific region
- New office underlines company’s commitment to its customers in South Korea

Vetter, one of the global leaders in prefilled drug-delivery systems, today announced the official opening of a new branch office in South Korea. The new office in Songdo is located within the biologics cluster which is often referred to as a ‘sweet spot’ by the industry as it houses numerous prominent biopharmaceutical companies and service providers.

Strengthening its global footprint in the Asia Pacific (APAC) region has been an ongoing goal for Vetter. The company established its APAC hub in Singapore in 2014, and subsequently formed a Japanese subsidiary by opening an office in Tokyo in 2015. Although the pharmaceutical service provider had already been active in the South Korean market for years, the establishment of its own local branch office underlines the company’s commitment to the Asia Pacific market, particularly South Korea. With the new footprint, Vetter will be better positioned to support its existing South Korean business as well as that of new local and global customers, helping them to meet stringent development, manufacturing and packaging requirements of their injectable drugs.

“Today is yet another milestone for our company. This new office will allow us to directly serve both local and global companies with South Korean market interests,” said Vetter Managing Director Peter Soelkner. “We are certain that our market presence and activities in this market will serve as an additional

base and contribution for Vetter’s future global organic growth.”

Vetter Pharma International GmbH D 88212 Ravensburg



Another ribbon cutting ceremony takes place for Vetter in the Asia Pacific region. Left to right: Mr. Michael Vetter (Strategic Market Development, Vetter), Mr. Park Yoon-bae (President, Incheon Business Information Technopark), Mr. Cho, Dong-Am (Vice Mayor for Political & Economic Affairs, Incheon Metropolitan City), Mr. Peter Soelkner (Managing Director, Vetter), Mrs. Chervee Ho (Director Key Account Management Asia Pacific, Vetter) and Mr. Oskar Gold (Senior Vice President Key Account Management and Marketing/Corporate Communications, Vetter). (Picture source: Vetter Pharma International GmbH)

The Dauphin HumanDesign Group unveiled the new "Industry Trainer" at the A+A 2017. With the five-minute exercise and stretching programme designed to prevent health problems, employees can get the most out of their health-promoting workplace furnishings. Incorporating the various exercises into one's everyday work helps to prevent muscular tension while encouraging concentration.

# "Industry Trainer": For healthy, motivated and productive staff in industrial workplaces



At the A+A 2017 in Düsseldorf, the Dauphin Group showed how working practices geared to preventing health problems can play a more important role in industrial workplaces. The focus was on the new "Industry Trainer". The short yet effective programme is designed to encourage workers to include regular activity phases in the form of simple relaxation exercises. By doing so, workers can improve their concentration skills and prevent muscular tension, headaches and back pain. The "mobilisation and stretching" exercises should be performed regularly during a working day. After all, five minutes every day are better than half an hour's training once a week.

## "Industry Trainer" encourages regular exercise

In order to make it easier for workers to perform the exercises, the Dauphin Group provides the "Industry Trainer" as a poster or brochure. These can be ordered directly by contacting [info@dauphin.de](mailto:info@dauphin.de). The posters or brochures can be put up or laid out in the workplace or in recreation rooms where they can be seen by everyone and serve as a visual reminder to do more exercise while at work. The exercises mobilise the thoracic spine, relax the shoulder girdle region, strengthen the back muscles and stretch the neck, thorax and the thigh and calf muscles. They are performed in flowing, smooth movements and the positions are held for 10 to 20 seconds. No extra equipment is necessary. Workers use the environment in their industrial



With the programme of exercises and stretches, workers can mobilise the thoracic spine, relax the shoulder girdle region, strengthen the back muscles and stretch the neck. The "Industry Trainer" from Dauphin helps workers to get the most out of health-promoting workplace furnishings. (Photo: Dauphin HumanDesign Group)

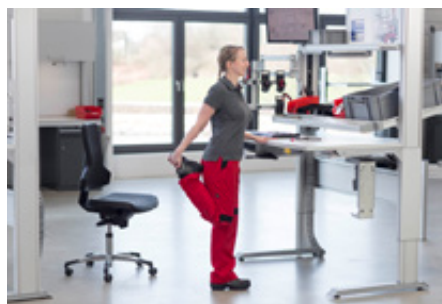


The new "Industry Trainer" from Dauphin is designed to encourage workers to include regular activity phases in the form of simple relaxation exercises. (Photo: Dauphin HumanDesign Group)

workplace to perform the movement and stretch exercises several times and on alternate sides. Regular exercise is essential when working; the "Industry Trainer" explains to workers how they can relax, strengthen and stretch their bodies during breaks and while working and encourages them to do so.

## Fewer health problems – higher productivity

Ensuring that workers can sit and work healthily in industrial workplaces is in the interests of employees and employers alike. Muscular, bone and joint pains are a key cause of sickness-related absence. Ergonomic furniture and work equipment combined with the correct working habits can help to prevent this. And as Aktion Gesunder Rücken e.V. (AGR) confirms, anyone who feels



The "Industry Trainer" from Dauphin explains to workers how they can relax, strengthen and stretch their bodies during breaks and while working and encourages them to do so. Workers use the environment in their industrial workplace to perform the movement and stretch exercises several times and on alternate sides. (Photo: Dauphin HumanDesign Group)



With the short yet effective exercises in Dauphin's "Industry Trainer" programme, workers can increase their concentration in industrial workplaces and avoid possible muscular tension, headaches and back pain. (Photo: Dauphin HumanDesign Group)

good while working in their laboratory, clean room, production area, workshop or assembly line is more motivated, does not tire as quickly and is more productive.

The ideal industrial workplace requires an ergonomic combination of industrial work chairs, standing seat workstations, ideal lighting, optimum reaching distances, perfect tool provision and smooth workpiece transport. This helps to protect workers' health and increases both efficiency and productivity. This integrated approach to furniture solutions and the importance of establishing ergonomic working habits were the focus of Dauphin's exhibition at this year's A+A.

**05th - 08th November 2019:  
A+A 2019,  
Duesseldorf (D)**

**DAUPHIN**  
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Fakuma 2017 – Innovation Driver with Practical Touch

# Fakuma Anniversary with Top Marks in All Categories

More exhibitors, more exhibition floor space, more expert visitors – all involved parties were highly satisfied: the autumn industry meet held in Friedrichshafen on Lake Constance where Germany, Austria and Switzerland meet vibrantly continued to ride its wave of success at the 25th Fakuma international trade fair for plastics processing!

Under the banner of the #celebratefakuma hashtag, private trade fair promoters P. E. Schall GmbH & Co. KG, venue operators Messe Friedrichshafen and not least of all the 1889 exhibitors from 38 countries once again celebrated Fakuma as a “plastics marketplace with family atmosphere”, as the spokesperson of the Fakuma exhibitor advisory committee, Sandra Füllsack, expressed it so affectionately and appropriately during her statement on the occasion of the opening press conference on the first day of the event.

Like hardly any other trade fair, the 25th Fakuma in 36 years also represents the development of German, European and, in the end, global plastics technology. Launched in 1981 with 60 exhibitors on 43,000 square feet of exhibition floor space, Fakuma now ranks second place throughout the world in the field of industrial plastics processing and the presentation of the necessary process sequences. Impressive numbers such as 1889 exhibitors and well over 915,000 square feet of overall exhibition floor space, as well as 48,375 expert visitors at this year's event substantiate the steady upward trend of plastics technology and Fakuma as an information and business platform at the heart of the market.

And the advancement of the internationalisation of plastics business is just as impressive as well: in 1981, seven of the sixty exhibitors came from outside of German, and this year 783 of 1889 came from outside of German. Current worldwide offerings for injection moulding machines, extrusion systems, thermoforming technology, additive manufacturing, tooling systems, materials and plastic parts attracted the interest of 48,375 expert visitors from 128 countries this year, which in turn allows one to draw the conclusion that the technologies, processes, materials and solutions presented at Fakuma

function as a sort of innovation motor for the global plastics processing industry.

An active focus on users and customers based on concentrated competence and empirical know-how combined with a wealth of information covered by the 38 presentations held by renowned speakers at the exhibitor forum during the four days of the trade fair – this year as well, Fakuma lived up to its reputation as a sales-promoting transfer pool which mediates between supply and demand. Beyond this, Fakuma plays an important driver role with its special offerings covering all aspects of recruiting, training and continuing education which are actively supported by industry institutions as well as market leading companies.

And the same applies to the Fakuma international trade fair for plastics processing where the initial unveiling of technology, process, tooling and product innovations is concerned. Numerous renowned and above all market leading companies select the respective Fakuma sessions in order to premiere their latest worldwide and European innovations, in order to obtain unfiltered feedback in direct contact with a global expert audience. Amongst other firsts, system and standalone solutions in the fields of lightweight design, additive manufacturing and digitalisation, as well as Industry 4.0, were included in this category at Fakuma's anniversary edition in 2017, which are of decisive significance not only for Germany as a plastics technology location, but rather worldwide for all industry players.

The 26th Fakuma international trade fair for plastics processing will take place at the Friedrichshafen Exhibition Centre from the 16th through the 20th of October, 2018.

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**16th - 20th October 2018: FAKUMA, Friedrichshafen (D)**

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P. E. Schall GmbH & Co. KG  
D 72636 Frickenhausen



The modular EE741 flow meter ensures cost transparency in compressed air consumption. The compact device can be used for pipe diameters DN15 to DN50.

## Flow Meter Identifies Potential Savings in Compressed Air Supply



The monitoring of compressed air consumption ensures cost transparency and helps cutting energy costs by identifying potential savings. The EE741 in-line flow meter from E+E Elektronik is ideal for measuring the consumption of compressed air and technical gases. Due to its modular design, the compact device is suitable for pipe diameters from DN15 to DN50 (1/2" to 2"). The thermal hot-film anemometer measuring principle provides high accuracy and reliability.

### For pipe diameters DN15 to DN50

The modular EE741 consists of the transmitter unit with flow sensor and a stainless steel or aluminum gauge mounting block. The mounting blocks are available for DN15 (1/2"), DN20 (3/4"), DN25 (1") and now also for DN32 (1 1/4"), DN40 (1 1/2"), DN50 (2") pipes.

The gauge mounting block enables easy and reproducible positioning of the transmitter in pipes with an operating pressure up to 16 bar (232 psi). Outstanding measuring accuracy, even in the lower measuring range, is achieved by the application-specific multi-point factory adjustment at 7 bar (102 psi). This allows precise leak detection and the consequent energy savings. The EE741 features an integrated consumption meter for cost-effective consumption monitoring without an additional data logger.



Image 2: New gauge mounting blocks for DN32 (1 1/4"), DN40 (1 1/2") and DN50 (2") extend the application range of the EE741. (Photo: E+E Elektronik GmbH)



Image 1: The EE741 flow meter measures and monitors the compressed air consumption with high accuracy. (Photo: E+E Elektronik GmbH)

### Easy installation and removal

Once the gauge mounting block is built into the pipeline, the transmitter can be easily removed and installed without disassembling the pipework. This is particularly useful for periodical calibration. Besides, one transmitter can be used for temporary measurements at several gauge mounting blocks. The sealing plug included in the scope of supply enables the operation of the compressed air system when the transmitter unit is removed. The robust stainless steel sensing head protects the sensing element against mechanical damage during installation or removal.

### Highly accurate thermal measuring principle

The EE741 works on the thermal hot-film anemometer principle. The E+E thin-film sensing element stands out by excellent long-term stability and short response time. The measuring principle is largely insensitive to contamination and eliminates the need for additional pressure or temperature compensation. The EE741 also measures the standard volume flow, mass flow, standard flow and temperature of non-corrosive gases such as nitrogen, oxygen, helium, CO<sub>2</sub> or argon.

### Comfortable operation via display

The optional display shows the actual measured data as well as the total consumption. The entire device setup can be performed with the display and the push buttons. For optimum readability the display alignment can be rotated in 90° increments. An EE741 without display can be configured via USB service interface using the free EE-PCS product configuration software.

### Several output options

The EE741 features two outputs, which can be configured for analogue, pulse or alarm signals. Optionally, the flow meter is available with a Modbus RTU or M-Bus interface.



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With the process spectrometers from Blue Ocean Nova for the inline analysis of liquids, gases and solids, Endress+Hauser is strengthening its offering for monitoring quality-relevant parameters.

**Intelligent inline spectrometers strengthen the process analytical instrumentation portfolio**

## Endress+Hauser acquires Blue Ocean Nova

Endress+Hauser is further expanding its portfolio of products, solutions and services in the field of process analytical measurement. The Group has acquired Blue Ocean Nova AG, a manufacturer of innovative inline spectrometers for monitoring quality-relevant process parameters. The company's 15 employees located in Aalen, Germany will be retained.

Blue Ocean Nova will operate under the umbrella of Endress+Hauser's center of competence for liquid analysis headquartered in Gerlingen, Germany. "The intelligent process sensors developed by Blue Ocean Nova will enhance our offering in the field of process analytical measurement, adding a strategic building block," says Dr Manfred Jagiella, Managing Director of Endress+Hauser Conducta GmbH+Co. KG. As a member of the Group's Executive Board he is also responsible for the analytics business.

### Innovative concept

The process sensors developed by Blue Ocean Nova cover the relevant optical spectroscopy regions of UV-VIS, NIR and MIR to analyze liquids, gases and solids inline. The innovative technology allows the spectrometer to be directly integrated into the measurement probe, even in explosion-hazardous areas. The sensors can furthermore be automatically cleaned and easily integrated into process control systems.

The systems from Blue Ocean Nova are utilized in the food & beverage, oil & gas, chemicals and life sciences industries for applications such as concentration and moisture

measurements and for measuring relevant quality parameters. The technology enhances the Group's portfolio, which already encompasses Raman spectroscopy, tunable diode laser absorption spectroscopy (TDLAS) and process photometers.

### Extensive experience

Blue Ocean Nova was founded by Joachim Mannhardt and Stefan Beck in 2015, bringing extensive product development experience in the field of industrial spectroscopy and process analytical measurements to the company. "Endress+Hauser opens the door to international markets and customers for us," explains Stefan Beck. Joachim Mannhardt adds: "We're convinced that our technology will be an ideal enhancement to Endress+Hauser's optical portfolio."

Endress+Hauser acquired Blue Ocean Nova effective 31 October 2017. Both parties agreed not to disclose the details of the transaction. Joachim Mannhardt and Stefan Beck will remain on the management team of the innovative company. "With this acquisition, we are continuing to pursue our strategy of strengthening the process analytical measurement portfolio and in the futu-



Dr Manfred Jagiella is Managing Director of liquid analysis specialist Endress+Hauser Conducta and also member of the Group's Executive Board responsible for the analytics business.

re supporting our customers from the lab to process," says Manfred Jagiella.

Endress+Hauser AG  
CH 4153 Reinach BL 1

# Pfeiffer Vacuum developed vacuum solutions for European XFEL

- Major European research project
- Milestone in nanotechnology research
- Customized vacuum pumps and vacuum equipment

The European X-Ray Free-Electron Laser (European XFEL) is a research facility of superlatives: It generates ultrashort X-ray flashes: 27,000 times per second and with a brilliance that is a billion times higher than that of the best conventional X-ray radiation sources. The flashes are produced in underground tunnels and will allow scientists to map atomic details of viruses, film chemical reactions, and study the processes in the interior of planets.

The processes at European XFEL require ultra-high (UHV) or high vacuum (HV) conditions. It is important to maintain a good level of vacuum so that the XFEL beam and high power lasers can propagate and interact with matter at the experiment stations without being affected by air molecules or hydrocarbons generating background signals on the detectors. Pfeiffer Vacuum, in cooperation with European XFEL, developed solutions ranging from vacuum pumps to leak detectors to vacuum components for many vacuum applications at European XFEL. All solutions were exclusively tailored to the specific needs and demands of these applications.

“High vacuum applications at XFEL predominantly use Pfeiffer Vacuum turbopumps, controllers and gauges. Additionally, our portable pump carts are equipped with Pfeiffer Vacuum solutions”, said Ian Thorpe, instrument engineer for HED (High Energy Density) Instrument at XFEL. “It was important that the vacuum equipment could be integrated into the specific XFEL control system.”

The idea to build the European XFEL was born at DESY (Deutsches Elektronen-Synchrotron), one of the world’s leading centers for the investigation of the structure of matter and a long-term partner of Pfeiffer Vacuum.

Being the main shareholder of European XFEL, DESY collaborates on the construction, commissioning and operation of the 3.4-kilometer-long facility. Together with international partners, DESY constructed the heart of the X-ray laser: the 1.7-kilometer-long superconducting accelerator including

the electron source. It starts at the DESY site in Hamburg and stretches to the town of Schenefeld in the German federal state of Schleswig-Holstein.

Pfeiffer Vacuum GmbH D 35614 Asslar



HiPace turbopumps installed at XFEL

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