

GEMÜ® news

Magazine for the customers, sales partners and friends of the GEMÜ Group

Edition 02/2012

GEMÜ®
START



GEMÜ is ready to step up to the next level!

We are optimistic about the future: the 2012 financial year showed a trend of very satisfying results for GEMÜ.

For example, the number of employees in the GEMÜ Group has increased world-wide by 250 since 2009. That is an increase of around 23 % - a remarkable achievement for a medium-sized family-owned company. The course has been set for the future development of the Group: The years 2012 and 2013 will be characterized by great strategic investments in the future.

- ⇒ A central Production and Logistics Centre for customized assembly and direct supply to Europe will be opening close to the company's headquarters in Germany in spring 2013. With this new 13,000 square metre complex, GEMÜ will create a completely new infrastructure for assembly, logistics and distribution over the coming years.
- ⇒ On 21 September 2012, our GEMÜ subsidiary in Switzerland opened in Emmen a new GEMÜ cleanroom production facility equipped with state-of-the-art manufacturing technology over an area of more than 5,000 square metres providing a significant increase in production capacity.
- ⇒ At our location in China, production and delivery capacities are being extended with the construction of a new building. Together with Sales, Research & Development and Administration, a modern facility is being created which will further strengthen our position in Asia.

GEMÜ in the future

We are currently reviewing our market focus and preparing ourselves to address the challenges of the future! We aim to make even more use than before of synergies within the GEMÜ Group. Our goal is to minimize production costs and increase volume - not least for the benefit of our customers!

Being an innovative company, focusing on unit costs alone is not the way forward. Because in our world - where many people can do many things - it's important to recognize what the many will need tomorrow. With our strategic orientation towards the pharmaceuticals, food & biotech, water treatment, high purity and medical sectors, we are ready to face the challenges of the



future. In addition to process technology, our focus will increasingly be on control engineering and systems.

One thing is for sure: we at GEMÜ cannot and will not afford to ignore the ongoing shift towards alternative energy. For this reason, the topic of "green technologies" - anchored in the Green Engineering initiative at GEMÜ - will also assume a very high priority. Our customized multi-port valve blocks, for example, are a highly effective solution to facilitate resource-efficient manufacturing and transport processes while maintaining - and even increasing - the functional capability of a plant.

We have set ourselves the target of conquering new markets: all we need to achieve this are highly qualified and dedicated staff, reliable business partners and satisfied customers. It is good to know that we can always rely upon our people and we would like to take this opportunity to thank everyone involved! ■

Gert Müller
Managing Director
Engineering & Sales

Stephan Müller
Managing Director
Finance & Operations

GEMÜ world first Diaphragm valve controls processes in "Single-Use" systems

GEMÜ, in collaboration with its customers, has developed the world's first series of single-use diaphragm valves. The single-use technology has undergone a transformation from manual systems to plant with automation capability allowing reliable operation and traceability of processes.

In addition to stainless steel plant designs, manufacturers are starting to adopt single-use technology in certain types of plant and subinstallations. In single-use processes all wetted disposable components - such as hoses, mode bags, filters and valves - are removed and disposed of upon

completion of each production cycle. In turn, completely new sterilized components are fitted for the next new batch. Single-use technology is playing an increasingly important role by allowing users to respond quickly to constantly changing requirements and process parameters, particularly in

research and pilot installations in pharmaceutical process engineering.

In the case of conventional stainless steel piping plant, this multi-production capability necessitates a great deal of validation work and carries an increased potential risk of cross-contamination in the case of

changing products. Single-use technology helps to reduce this risk of contamination. It also allows investments to be made in expensive production equipment at a significantly later date and therefore with less risk.

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Career day in Künzelsau
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Trade journalists very interested GEMÜ cleanroom plant in Emmen

GEMÜ Switzerland has opened a state-of-the-art cleanroom plant in Emmen.

The trade press visits Emmen

Large events cast their shadows ahead: in the run-up to the event, "reinraum online" newsletter published impressive images and reports of the construction site in Emmen in the Canton of Lucerne. Located just a few kilometres from the GEMÜ plant in Rotkreuz, the building stands out prominently with its striking architecture based on the GEMÜ corporate design, bright rooms and high gloss floors as well as state-of-the-art technology. In the office floor, a large map of the world adorns the reception desks and shows where all 20 of GEMÜ's subsidiaries are located. Several journalists from the trade and local press had agreed to attend and were present at the official opening of the new cleanroom facility on 21st September 2012. To ensure they all knew what they were writing about, after the obligatory aperitif they were taken on a guided tour of the plant.

Exploring the cleanrooms

The symbolic first step across the threshold was of course taken by our owner and founder Fritz Müller. Plant manager Michael Waser led us on a guided tour through the 5,300 square metres of cleanroom and hygiene areas. We walked one behind the other in single file, because the plant was already in operation. The injection moulding department has already moved and the new cleanroom areas

are already "manned", as it were. Managing Director, André Schüpfer, and Head of Medical Sales, Beat Wasser, also enthused over the plant rooms housing the heating, water distribution/supply, air conditioning and air extraction systems. Not only because GEMÜ valves can be seen here.

Talks with the experts

Afterwards, we made our way to the modern cafeteria in pairs for talks with the trade press. A photographer and a film crew recorded the entire event for posterity and eight GEMÜ experts were on hand to answer all the journalists' questions. The next few weeks and a glance at the DeviceMed, Swiss Plastics, Pharma+Food, Chemie Plus and KunststoffXtra magazines will show that we have indeed succeeded.

Cutting another ribbon

Now we could devote our attentions fully to the official opening of the new GEMÜ cleanroom facility. Fritz Müller and André Schüpfer cut the ribbon in the presence of Government Councillor Robert Küng. After that, the attending invited guests, some 200 in number, went on a tour of the new premises led by the Müller family.

The plant is finished and opened!

In his speech, Fritz Müller stressed:

"We have spared no efforts to create a production facility which meets all our wishes and expectations and which will no doubt also meet all the requirements of our customers in regard to cleanroom production". Walter Stalder, Director of Business Development Lucerne, raised a glass to this in conversation with the Managing Directors Müller and Schüpfer as well as Government Councillor Robert Küng. It is of great importance to the Canton of Lucerne to create the right environment for the settlement of new companies. This aim has been successful; so too were the celebrations that evening. In between pumpkin soup, autumn vegetables and lukewarm chocolate cake, a satisfied André Schüpfer remarked: "As a Swiss GEMÜ subsidiary, we are both builders and plant operators. We have specialized in bespoke plastics solutions for the semiconductor industry and medical industry in particular. As we all saw today: there is more to come! With our Swiss strengths of precision and thoroughness coupled with reliability and industriousness, we aim to make a bigger impression on the market!"

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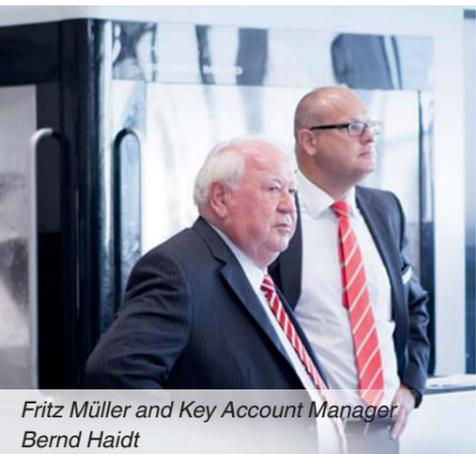
Opening ceremony. Managing Director GEMÜ Switzerland André Schüpfer, Owner Fritz Müller and Government Councillor Küng (f.l.t.r.)



Façade of the new cleanroom plant



Head of Medical Sales Beat Wasser (right) talking to a journalist



Fritz Müller and Key Account Manager Bernd Haidt



Fritz Müller and Corinne Bütler, Personnel Manager at GEMÜ Switzerland



Managing Director GEMÜ Switzerland André Schüpfer



A very successful event



Still more cleanroom

Opening of the new GEMÜ manufacturing plant

The dimensions of the building are huge. Flat and stretching out, it nestles in the landscape. The building in Emmen, in the canton of Lucerne, represents the newest trends in new industrial cleanrooms. It is the latest GEMÜ Group manufacturing plant. It was opened on 21 September 2012.

The building commissioner and plant operator is the Swiss subsidiary of GEMÜ. It specializes in valves and accessories for semiconductor systems and customized plastics solutions for medical use. With the new plant, our capabilities to service the medical industry are considerably improved. GEMÜ Switzerland in Rotkreuz already manufactures approximately 50 medical products via injection moulding processes, from individual components to complex sterile finished products. In the valve industry, a total of between 6000 and 7000 types are produced. "Polypropylene is a popular plastic, but a large range of materials is used depending on the product", says the Managing Director André Schüpfer. Due to its varied properties and high performance capability, many providers of medical products now prefer plastic as opposed to metal, which was originally the material extensively used. "We are encouraging this trend thanks to innovative products and modern production", says André Schüpfer.

A manufacturing plant for the future

Construction of the new manufacturing plant in Emmen took 18 months. The building is designed for the future and was created in accordance with energy-saving considerations and the latest knowledge and guidelines of the cleanroom sector. Heat recovery systems are used for heating. Heat pumps are also in use. "Therefore, in Emmen, we are also up-to-date as far as energy is concerned" says Michael Waser, the Operations Manager of GEMÜ Switzerland.

The huge size of the production hall also hints at big plans for the future: the hygienic area for injection moulding and assembly alone stretches over 2500 square metres; approximately 1800 square metres are allocated to injection moulding to cleanroom ISO8, while a further 1000 square metres, also with cleanroom ISO8, are reserved for assembly. This area can be increased to cleanroom class ISO6 at a local level. All ISO classes can be operated together. A total of 10 injection moulding machines with a machine closing force of between 35 tons and 300 tons are available here.

Wide range of services of the highest quality

The range of services includes the manufacture of medical industry products, the manufacture of single-use disposable valves and high purity manufacturing, and finally cleanroom assembly of components or end products and packaging according to customer requirements. Extensive equipment is available to the

latest technological standards. Specially qualified and continuously trained personnel as well as a finely tuned quality management ensure that the quality is consistent and reproducible. "We have a highly-qualified workforce in all areas", says Waser. "And naturally, we comply with all required validations and certifications which our current and future products must have."

Precise and punctual like a Swiss clock

Cleanroom quality is the first priority for GEMÜ Switzerland products. Valves and measurement equipment are largely automatically produced, assembled and made ready for dispatch. Therefore, contamination risks are ruled out from the start and international standards – particularly SEMI Doc.57-0301 – are met. If manual assembly is required, specially qualified employees are also used for this.

With the GEMÜ Group, customers can obtain everything from a single source: from research and development using personal advice to assembly and maintenance. The new manufacturing plant therefore allows the company to react even more flexibly to customer needs. In addition, the new plant is located only around 15 minutes in the car away from the first plant in Rotkreuz, in the canton of Zug. This guarantees a quick exchange between the locations and a smooth transition of production. The quality and quick processing of orders is guaranteed. This means high process system safety for customers.

High scores for precision and sustainability

Cleanroom production is an industrial sector with a future. Medicine and pharmacy, the semiconductor industry and foodstuffs production – research and technology are developing rapidly in these sectors. "With the new manufacturing plant, the medical sector gains a strong foundation and is ready to capture new markets", says David Graf, Head of GEMÜ Medical Technology. In addition, the tool manufacturing sector should also be expanded here, which complements the mould making focus in the German Ingelfingen location. In addition, semiconductor production remains an important sector which can be expanded. ■

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GEMÜ CleanStar® is manufactured in the new cleanroom



Tour of the new premises



View into one of the production halls

Figures, dates and facts

- ⇒ 21,104 m² total area, of which 6,802 m² developed
- ⇒ 522 bored piles (each approx. 10 m deep) used for the foundations
- ⇒ 89 individual activities ordered
- ⇒ 77 companies involved in the construction
- ⇒ 1,140 m² glass for the façade
- ⇒ 5,400 m³ concrete
- ⇒ Approx. 93 km of computer and power cables
- ⇒ 475 tons steel-girder construction, 700 tons structured steel (reinforced steel)

Climate and energy

- ⇒ 128,400 m³ of air mass moved per hour
- ⇒ All technical components are centrally ordered, in order to optimize management and length of channels, and to keep losses small
- ⇒ A well supplies the heat pump and pre-cooler
- ⇒ Heat recovery with chiller and compressed air production
- ⇒ Innovative cleanroom ventilation concept: only partial volume flow is dehumidified (energy saving)
- ⇒ Exhaust air is used fully (no excess of exhaust air). Air conditioning of outdoor air is therefore minimized
- ⇒ Storm water retention under the building and the car parks. In this way, no building land is given over to retention
- ⇒ Energy-saving reduced operation of the cleanroom plant outside of production times
- ⇒ Ventilation is managed using a rhomboid butterfly valve. Thanks to this innovative system, air volume can be saved. Only outdoor air must be dehumidified, which saves energy
- ⇒ Cooling of injection moulding machines and cooling cassettes using groundwater. Additional heat is extracted from groundwater and added to the systems engineering. Furthermore, the cooling process is then fed at a temperature level of approx. 7°C

Redundancies

- ⇒ Emergency power supply 300 kVA
- ⇒ Heat extraction from the emergency power generator, in order to be able to operate the cleanroom ventilation in winter, even during power failures
- ⇒ Well cooling and chiller
- ⇒ Two ventilators per ventilating system. If a ventilator fails, the plant can go into reduced operation
- ⇒ Electrical emergency heating if the heat pump fails
- ⇒ Double pump for heat distribution
- ⇒ Reserve vacuum pump for resin supply
- ⇒ In the event of a failure, process cooling can be generated by way of the well water (ground water) via the heater exchanger pump and cooling unit
- ⇒ Heat recovery in the stratified storage tank for compressed air and ventilating system

GEMÜ Scaling New Height

Topping-out ceremony at the Hohenlohe business park

At the Hohenlohe business park, a state-of-the-art GEMÜ Production and Logistics Centre is under construction covering an area of 13,000 square metres close to the A6 motorway. At the topping-out ceremony in September, it was clear that the new building is about much more than simply making space

“Until we are able to send valves by e-mail, we have to share the roads! Actually, that could be on our new lorry”, smiles Stephan Müller, Managing Director Finance & Operations at GEMÜ in the Kocher Valley. To guarantee that future deliveries are faster and more efficient, the company is constructing a state-of-the-art Production and Logistics Centre for direct delivery across Europe. This means that the logistics for the 20 GEMÜ locations and six worldwide production companies will all be combined at a single site.

Integrating production companies into the system

There is still some time before commissioning the 6,500 m² production and 3,500 m² logistics area in early 2013. Creating space is just one reason for the new construction. For Hermann Walter, the philosophy behind the new building is just as important. “With the completion of the Production and Logistics Centre, we also want to integrate the production companies into our multi-site environment” explains the Head of Production and Logistics at GEMÜ. Following the development and implementation of the integrated workflow within the main plant, and integration of the sales companies into the supply chain, we are now focussing on integrating the subsidiaries. First, across Europe and in the medium term, worldwide.

Standardized workflow prevents human error

For Hermann Walter, the reasons are obvious: “The future success of the company depends greatly on the speed and accuracy of our processes today”, he emphasizes. This requires all information, such as the availability of resources, to be available immediately at the time of order registration with

no interfaces – regardless of whereabouts in the world the order is received. It also requires automated production and a reliable warehouse management system that eliminates human error as far as possible.

GEMÜ aims to achieve this objective with a standardized workflow at the new Waldenburg site. “This enables us to once again significantly increase our materials handling at a stroke. We assemble complete products from individual parts and assemblies, and deliver them to end users within 48 hours. And our system technology also enables us to flexibly adapt to continually changing market conditions and resources”, explains Hermann Walter.

Effects on the group

In the construction of the new logistics centre, GEMÜ has also taken future demographic development into account. The workstations are ergonomically designed and in anticipation of an increasing number of older employees, the conveying technology has been raised to working height. This significantly eases work processes, particularly in picking.

The opening of the new centre will also mean some changes within the group. Warehouses in the sales offices throughout Europe can be completely decommissioned, while the Production and Logistics Centre can supply customers faster, in larger quantities, and with greater accuracy. Subsidiaries also have the new possibility of serving previously untapped markets. They are able to access a considerably greater variety of components and can expand according to their range of services.

Around 150 GEMÜ employees will relocate from the Criesbach site to the Hohenlohe business park next spring. In the parent company on the Kocher river, those who are not moving are also eagerly awaiting more space.

Investment in the future

GEMÜ has invested around ten million euros in the largely customer-oriented development, which lies close to the A6 motorway. “Without Fritz Müller and his wealth of ideas, this new site and the new premises would not be possible in this format”, Hermann refers to the senior director. At the topping-out ceremony, Fritz Müller emphasized that the “location on the motorway and the B19 main road” would be “ideal”. He reported that with the Production and Logistics Centre, GEMÜ has invested in the future and taken a further major step towards internationalization. ■

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Mr. Bühler (steel construction company Bühler) and employee during topping-out speech



GEMÜ founder and owner Fritz Müller and his wife Ingrid



Applause after the topping-out speech



Full reorganization of processes

Logistics Centre improves processes

On 12 September 2012, GEMÜ held a topping-out ceremony in its new Production and Logistics Centre at the Hohenlohe business park, located directly by the A6 motorway at the foot of the town of Waldenburg. GEMÜnews spoke to Hermann Walter, Head of Production and Logistics, and Matthias Fick, Head of Logistics and Supply Chain Management

GEMÜnews: Mr. Walter, GEMÜ is investing around ten million euros in the Waldenburg site. What does the new Production and Logistics Centre at the Hohenlohe business park mean for the group as a whole?

H. Walter: Firstly, that we are creating space for future developments. There is limited space available in the Kocher Valley, and, basically, we have already almost reached our limits there. At the Hohenlohe business park, the option of further open areas also offers expansion possibilities for the coming decades.

But this is just one aspect. For me, the significance is that we are basically reinventing ourselves in Waldenburg. Our processes and our whole supply chain are being completely redesigned.

GEMÜnews: How can we visualize what that means?

H. Walter: So far, GEMÜ completes around 300,000 customer-related, multi-stage processes per year, and dispatches them on time with delivery times of between one and thirty working days. To enable this, approximately 20,000 different articles are kept in stock, from which up to 400,000 different end products are manufactured – and the trend is still increasing. Numbers like these can no longer be achieved efficiently using the classical “man-to-goods” philosophy. Therefore, in future, goods will be transported to staff members using a conveying system.

The merger of the local warehouses across Europe into one central Logistics and Distribution Centre will optimize the availability of our products worldwide. We are also currently in the process of integrating the production companies into our multi-site system and completely reorganizing the order processing system. In Waldenburg, we are bringing together all customer-specific assembly and logistics activities in Europe under one roof. The new high-rise store will be stocked with all the components that we require to provide rapid customer service throughout Europe, supplying individual parts and final products, as well as pre-built assemblies. From these individual components, we then manufacture customer-specific products, construct complex assemblies, and deliver to anywhere in Europe within 48 hours. Wherever a customer order is received in Europe – the sales order, including all delivery information, is created centrally and processed on that same day in the logistics centre.

This has many advantages, in that delivery times are drastically reduced while delivery quality is significantly increased. External warehouses are no longer required, enabling our subsidiaries to focus entirely on sales and consulting.

GEMÜnews: Mr. Fick, this all sounds highly technological. Did GEMÜ simply come up with the idea overnight?

M. Fick: Not at all. This is a process that has been ongoing for over ten years. You might say we are now in the third phase of the implementation.

In the first phase, between 2000 and 2002, we designed and implemented an integrated workflow in our main plant. In the years that followed, this system has been continually optimized and, for example, the inventory situation was improved with the introduction of a forecasting system and dynamic production reconciliation.

From 2005, we then began integrating the sales companies into the supply chain workflow, with the aim of ensuring the direct flow of information from the end user into planning and distribution. This process is not yet fully complete. So far, 12 sites in ten countries have been successfully integrated into our multi-site environment. As a result, we have already been able to decommission all local warehouses across Europe, and central distribution to all end users is now possible. Furthermore, a process for cross-plant delivery date

determination has enabled us to simplify the order process and as a result, significantly lower delivery times.

We are now in the third phase, which involves the integration of production companies into the multi-site environment. Integration of the production plant in China is already underway, with Switzerland next, followed by Brazil and the USA. We will then have achieved a consistent information workflow throughout the whole GEMÜ Group.

GEMÜnews: What role will the new Production and Logistics Centre play in this process?

M. Fick: Quite a major role. We are also developing an automated intralogistics system and integrating a warehouse management system. With these projects, we hope to reap the benefits of all the successful work of recent years. All the threads from around Europe will then come together here for the first time. The customers will also notice the changes, when they receive their deliveries faster and more efficiently.

H. Walter: The new Production and Logistics Centre is essentially a milestone along the route to a full restructuring of the company. In the long term, we also plan to set up similar centres on other continents, in Asia and America. As we continue development, it is therefore also of primary importance to consider the country-specific and cultural particulars, or “soft keys”, which can mean the difference between success and failure, acceptance and rejection.

GEMÜnews: What is the situation among employees here in Germany? What is the level of acceptance for the “Waldenburg” project?

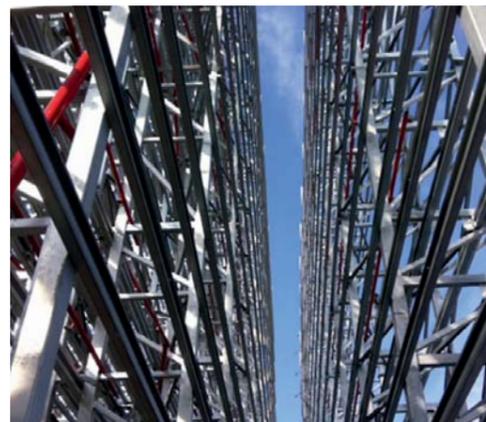
H. Walter: Our employees realize that we are taking a great step towards the future, and they want to be part of it. Employees who are moving to Waldenburg next spring are receiving intensive preparation for the new working environment. We are training them for the new systems and introducing them to new duties.

GEMÜnews: Will the new Production and Logistics Centre be the final step? Or can we expect further projects?

M. Fick: In terms of software, the process is never actually completed. Even when the system is up and running and stable, ideas for further development are never in short supply. This is a classic continual improvement process. For example, at the start of this year, we set up a new ERP competence team, which is responsible for new solutions across all departments.

H. Walter: Even taking into account the current dynamic rate at which GEMÜ is growing, at present the capacities in Waldenburg will be sufficient for the next six to eight years. But of course: in the event of a sudden explosion in growth, there is nothing to stop us from evaluating the available options and continuing to expand.

GEMÜnews: Mr. Walter, Mr. Fick, Thank you for the interview. ■



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>> continued from front page CIP/SIP processes are no longer needed

The secondary processes for cleaning and sterilization (CIP/SIP) that are well-known and required for classic stainless material plant designs are in practice no longer necessary at all with single-use plants.

This reduces the investment costs of such a plant and also eliminates the extremely time-consuming cleaning validation process for operating media that are no longer required. The necessary sterility of all the process components used is ensured by utilizing gamma rays.

Ready to use

Gamma sterilization renders the single-use components "ready to use". This largely eliminates the need for manpower-intensive and costly plant qualification. After construction and installation, the plant is immediately ready for operation and production.

Hitherto the disadvantage of the single-use technology has been the lack of, or low level of, process automation and controllability of the systems. GEMÜ has now developed the world's first series of single-use diaphragm valves to meet the increasing demand for automation capability in single-use processes. The valve body and pneumatically operated actuator are connected to

each other by a new technology: after the application process, the valve body is disconnected from the actuator, and multiple use is prevented by a specially designed predetermined break point in the valve.

The valve body is manufactured out of special polypropylene in a cleanroom and is gamma sterilizable up to 50 kGy. It isolates the working medium hermetically from the environment and from the actuator (which is retained to allow multiple use in the plant) by means of an internally welded diaphragm. The medium remains closed off from the environment by the welded diaphragm not only during operation, but also after removing the actuator.

Depending on the process requirements, the diaphragm valve body can be delivered directly to the plant as a unit with gamma-sterilized tubing and bags. Personnel only have to fit this bag assembly using simple clamp or tube connections and can then put the system into operation.

Reproducible and documentable procedures

Automation capability makes for reproducible and documentable procedures – a key requirement for pharmaceutical processes.

The GEMÜ series of single-use diaphragm valves will initially be available in two valve body versions and in nominal sizes from 3/8" to 1",



The prototype of the Single-Use Valve looks promising



with hose barbs or TriClamp connections: as a 2/2-way body for flow isolation and control and as a T body allowing fully automated sampling of fluids from an existing plant.

The products are currently in the internal validation phase at GEMÜ and are already installed and in use in several customer test installations. Series delivery will probably begin in spring 2013, an enclosed Validation Guide summarizes all of the information and qualification data required for pharmaceutical production. ■

GEMÜ single-use diaphragm valve:

- ⇒ High process system safety
- ⇒ Can be automated through pneumatically operated actuator
- ⇒ Reliable and tested diaphragm valve technology

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Exhibitions 2013 international

Semicon	30.01. – 01.02.	Seoul (KR)
Vision Pharma	05.02. – 07.02.	Karlsruhe (D)
Semicon	19.03. – 21.03.	Shanghai (CN)
Pharma-Kongress	19.03. – 20.03.	Düsseldorf (D)
MSR-Spezialmesse	20.03.	Halle (D)
WIN2	21.03. – 24.03.	Istanbul (TR)
TechnoPharm	23.04. – 25.04.	Nuremberg (D)
Interphex	23.04. – 25.04.	New York (USA)
FCE	14.05. – 16.05.	Sao Paulo (BR)
Mining World Russia	14.05. – 16.05.	Moscow (RU)
Pumps, Valves & Pipes	14.05. – 16.05.	Midrand (ZA)
Reitze Tec	15.05. – 16.05.	Bremen (D)
KoreaPack	22.05. – 25.05.	Seoul (KR)
Interphex	04.06. – 05.06.	Singapore (SG)
MSR-Spezialmesse	05.06.	Hamburg (D)
Fooma	11.06. – 14.06.	Tokyo (JP)
Intersolar	19.06. – 21.06.	Munich (D)

Successful presentation at CHINA-PHARM 2012



CHINA-PHARM 2012 was held in Beijing in September. GEMÜ once again showed its latest equipment and technology, also its leading position of valves for the pharmaceutical industry in China. GEMÜ China has annually participated in CHINA-PHARM since 1999 and developed quite a few customers through this exhibition.

Significant exhibition for the global pharmaceutical industry

Jointly organized by the China Center for Pharmaceutical International Exchange and Messe Düsseldorf (Shanghai) Co., Ltd., the 17th China International Pharmaceutical Industry Exhibition (CHINA-PHARM 2012) was opened on September 24 at China National Convention Center (CNCC) in Beijing. In the following 4 days, 462 exhibitors from 21 countries and regions participated in this great event, presenting their services and products in a space of 30,000 sqm. Renowned domestic and international exhibitors were present at the event, for example, BOSCH, AUSTAR, NNE, TRUKING, DOUBLE-CRANE, MORIMATSU, GYLONGLI, SHINVA, HUNAN CHINA SUN or GE INFRASTRUCTURE.

In the past decade, CHINA-PHARM exhibition has experienced continuous growth and become the renowned exhibition with significant influence in the global pharmaceutical industry. It establishes the platform of cooperation and communication for the pharmaceutical industry at home and abroad.

GEMÜ China shows innovation capacity and professionalism

The new GEMÜ products such as 650TL, 555, 580 and multi-port valve blocks gave the visitors excellent impressions and convinced them of the innovation capacity and leading role of GEMÜ in the areas of science and engineering. The two sets of demo equipment and multi-port valve blocks

enabled the visitors to understand more clearly about the product benefits and how they work.

"Process", the famous industry media made a live interview to Mr. Jerry Zhao – Sales Manager of Pharma, Food & Beverage Business Unit of GEMÜ China in CHINA-PHARM. Jerry Zhao introduced the market situation of GEMÜ China and the new products & technologies. During the interview, GEMÜ booth became the focus of visitors' attention.

Market leader for valve applications

Many exhibitors in CHINA-PHARM 2012 are customers of GEMÜ and displayed their equipment with GEMÜ valves. GEMÜ products have good reputation and are widely used in pharmaceutical factories and GEMÜ China is the market leader for sterile valve applications in the pharmaceutical industry in China.

To make the exhibition successful, the staff from sales & marketing and our Technology dept. participated actively in its preparation. We also got excellent help from GEMÜ German Headquarters. Mr. Thomas Schmeisser, Team Leader Trade Fair Organization, gave great support on demo equipment, samples and promotional gifts. Mr. Peter Meyer, Manager Automation Division, also supported us and his presence in CHINA-PHARM raised our company's professional and international image at the exhibition. ■



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Green Drive from GEMÜ

Energy-efficient actuator technology



There has been a paradigm shift in valve actuation: from pneumatic to electric. At the same time, energy efficiency and resource conservation are playing a central role in new developments. As part of a green engineering initiative, GEMÜ has now developed a “Green” electronically commutated (brushless) actuator.

GEMÜ is concentrating all its environmental activities under the “GREEN ENGINEERING” label and is developing energy-efficient solutions which preserve resources under the three headings CLEAN PRODUCTION, CLEAN PRODUCTS and CLEAN PROJECTS. “Products which are better than their predecessors from an environmental point of view or which perform better than the products of a competitor are awarded the GREEN ENGINEERING label”, explains GEMÜ Managing Director Gert Müller, who started the green initiative.

Energy-efficient and resource-saving

The EMAS-certified company now has developed a new, electronically commutated actuator design with direct drive, which is produced using less energy and fewer materials. But it takes more than this alone to be awarded a GREEN ENGINEERING label. “Only products which also offer our customers clear advantages are awarded the label”, says Patrick Zurbuchen, Head of Sales Group.

The features which distinguish the electronically commutated actuators in production also give the customers advantages: Brushless motors consume less energy than conventional actuators, they reduce material consumption thanks to their pinpoint controllability, and their compact design reduces space requirement. They can also be installed quickly and easily.

Replacing pneumatics with electrics

Increased electrification is the logical next step for industrial applications. While electrification has already progressed in the automotive industry, for example, a paradigm shift from pneumatics to electrics is only taking place now in valve technology. GEMÜ is consistently pursuing automation and, as a systems provider, is pushing ahead with electrification. The integrated coupling of electrics and mechanics in compact units creates highly efficient systems which carry out a wide range of tasks in the smallest of spaces.

At the interface between flexible electronic systems and comparably rigid mechanical systems, the new GEMÜ actuator generation excels through its ability to integrate control and regulation functions. The result for plant designers: fewer machines, less material, less installation effort - and fewer risks.

Progressive functions reduce operating costs

Electronically Commutated (EC) motors operate reliably and require little maintenance. Thanks to proven EC actuator technology, sufficiently high output and control speeds for process valves can be flexibly achieved. In addition, electric actuators provide higher stability in the control and regulation chain when compared to pneumatic units. Another advantage: the system can shut down the power element, depending on application, for example in end positions, while integrated intelligent control functions reduce power consumption in controlled operation and lower current consumption. By recognizing system conditions, it is possible for the control module to optimize the power supply. This means that the system automatically reduces the forces and saves energy, while offering the user complete control.

The electric actuator control unit provides the option of applying a wide range of functions such as energy consumption optimization or preventive servicing. It forms the interface to the central plant control system. GEMÜ fits these actuators with various interfaces for technical connection to the automation level, from an IO link to connection with industrial Ethernet networks. This means that radio-controlled remote communication is possible, even via the internet. As a manufacturer, GEMÜ provides an extensive remote service for the electric actuators, from installation to remote maintenance.

Quick return on investment

GEMÜ offers this new electric actuator design as an entry-level and high-end version. The entry-level series for price-conscious market segments is extremely compact and has been designed with all the essential functions



Electric actuators are superior to their pneumatic alternatives

whilst providing very good value. As a small and lightweight unit, the actuator can replace conventional pneumatic systems in many areas, for example in the flow control of continuous feed lines of cooling and rinsing circuits or in pressure retaining or limitation applications.

In the high-end series, several component sizes facilitate the control and regulation of process valves with up to size DN100 diaphragm valves. The high performance direct actuators with optional manual operator and optional locking brake are ideal for automated process solutions.

Positive life cycle assessment

Electrically automated valves are energy efficient and save electricity. Sensitive regulation and control systems with low measurement tolerance actually lower resource consumption. This results in a positive life cycle assessment. From an economic point of view, an investment in GREEN ENGINEERING products mostly pays for itself in a short period of time: fast and precise-working electric actuators lower the operating costs and increase productivity and profits. In addition, the wear-free and low-maintenance actuators keep processes more stable and sequences more secure. This all provides added value for the plant. ■

Electric actuators from GEMÜ:

- ⇒ Support resource saving process control systems
- ⇒ Promote fully electric operation in order to help reduce parallel energy forms
- ⇒ Integrate regulated, safe functions for high-performance, flexible operation
- ⇒ Ensure seamless integration into the automation system
- ⇒ Are compact in design and save space in the plant
- ⇒ Enable integrated, easy-to-use options
- ⇒ User-friendly technology platforms offer the best possible cost-benefit outcome



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GEMÜ sampling system for sterile applications



GEMÜ offers a wide range of sampling systems. Complementary accessories round off the product line.

As component and system suppliers to the pharmaceutical, biotechnology and cosmetics industries as well as to the food and beverage industries, GEMÜ can supply a variety of sampling systems for sterile applications. The individual systems are designed to meet specific requirements and can be customized to suit plant environments. For example, GEMÜ can deliver solutions for entirely different plant sections. GEMÜ valve bodies provide a high level of safety due to their smooth, polished surfaces in media handling zones and their hygienically compatible, optimized draining design. Pneumatic and motorized actuators allow automated sampling. Outlet sizes are freely selectable from DN4. Standard solutions are available up to DN25.

All GEMÜ sampling solutions allow safe, reproducible sampling of liquid and gaseous media and steam. Autoclavable systems are also available as an option.

Tank valves

GEMÜ tank bottom valves and tank wall valves for sampling from tanks are available in various versions, e.g. as a body with integrated sampling option or as an integrated CIP/SIP valve with sampling option. The valve bodies are usually manufactured from a single block of material. They can easily be welded to the bottom of the tank, the tank wall or the tank cover. Due to their compact design, they are ideal for use in confined spaces. They are available in different nominal sizes and designs.

T valves

T valves are generally welded into ring mains and are specially designed to minimize deadlegs in sampling applications. T valve bodies with body configuration "A" are suitable in particular for large ring mains with small branches.

i-bodies

i-bodies are a special variant of the classic 2/2-way body. These valve bodies have two valve seats and three line connections. They are manufactured from a forged blank or a piece of block material and therefore have an extremely compact design coupled with minimized deadleg.

Multi-port valve block systems

GEMÜ multi-port valve block systems are mainly used in applications requiring the implementation of multiple functions in confined spaces and / or the avoidance of welds. Manufactured from a single block of material, they can be used for applications such as space-saving point-of-use WFI, sampling, condensate drainage, filling, drainage and sterile steam supply for

CIP/SIP. Countless body configurations can be implemented to provide optimal customer solutions.

Sampling bottle system

Valid samples can be taken for laboratory analysis safely and simply and transported using the GEMÜ bottle system. A customized multi-port valve block serves as a sampling valve.

Special valves

GEMÜ also supplies two versions of its tried and tested GEMÜ 650 valve type for various application scenarios. GEMÜ 650TL is to be regarded as a manual tapping valve which is moved to the safety position (closed) by pneumatic control in case of emergency. This prevents manual sampling and for example protects employees against scalding thus enhancing work and process safety. GEMÜ 650 with hand lever 1010 also serves as a manual tapping valve which allows fast and safe manual sampling. This is achieved with a simple "dead man's handle" – as soon as the lever is released, the valve closes. Another advantage is the defined spring closing force which significantly increases the service life of the diaphragm.

Accessories and special solutions

With these products we can offer our customers a complete range of components for sterile / aseptic applications. GEMÜ sampling systems utilize tried and tested drive systems and are manufactured from specially selected, safe and certified sealing materials. GEMÜ is able to draw on superior proprietary technology for the production of its actuators. Pneumatic membrane actuators are designed to offer low maintenance and maximum service life, even in applications which involve frequent switching cycles. The tried and tested bonnets are optionally available with additional functions, such as a stroke limiter. Sampling systems can be automated at any time if required. ■



GEMÜ 650TL

GEMÜ 650 with attachment 1010



GEMÜ B600



GEMÜ M600



GEMÜ i-body

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Production plant fitted out

For the French subsidiary of the American OM Group, GEMÜ has fitted out a new ultra pure production plant for the semiconductor industry with plastic diaphragm valves, flowmeters and high purity valves.

The plant produces materials for use in electrolytic metallization processes. Thanks to the use of high purity materials (PFA-HP, PVDF-HP, PTFE), the manufactured products have a lower average contamination than 1 ppb (parts per billion, corresponding to 10⁻⁹, i.e. 1 particle per 1 billion particles). The OM group is one of the leading world-wide manufacturers of high purity

chemicals, with their headquarters in Cleveland (USA) ■

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Stabilization and expansion 2013



For 2013, GEMÜ is focusing on three main topics: Expanding our range for industry, expanding our activities in the area of plastics, and achieving the same good results as seen in the pharmaceutical, food and beverage industries. Patrick Zurbuchen, Head of Sales Group, reports here on what this means in detail

GEMÜnews: Mr Zurbuchen, before we talk about 2013, let's start with a little review: How was 2012?

P. Zurbuchen: The past year has been a good year. It looks like we will slightly exceed our ambitious growth objectives. In particular, this is being driven by our pharmaceutical business. With our all-round system solutions for multi-port valve blocks, we were able to successfully win several pharmaceutical projects. In addition, we are pleased that we were able to achieve growth in the food and beverage industries. But we also do not need to shy away from the competition when it comes to customers in other sectors. This was proven in impressive fashion by this year's ACHEMA, our trade fair which takes place every three years. The new products and innovations that we presented at the trade fair really impressed customers and will set trends over the coming years. In this respect, it is of course worth mentioning the single-use diaphragm valve or the innovative electric actuators (for more information about this, see pages 1, 6 and 7).

GEMÜnews: Keyword "industry". This sector is a very broad field: Which aspects are GEMÜ focusing on?

P. Zurbuchen: In particular, water and waste water treatment is an extremely lucrative sector for GEMÜ and it is one in which we want to participate more, but we have to do our homework here. From an organizational point of view, we have to meet the specific requirements of this industrial sector and, from a technological point of view, we have to gain a better understanding of the needs of this customer group and adapt our product range to these needs. This will keep us busy well beyond 2013, but it will bring with it the advantage of diversifying our range of products and therefore taking a step back from business cycles in specific sectors.

GEMÜnews: What are the specific requirements for this?

P. Zurbuchen: In the water treatment industries, this involves project business, international tenders and long-term specification work. In addition to the opportunity to provide the customer with valve solutions from a single source, we have employed experts who, on the one hand, have contacts in this industrial sector and, on the other hand, have the technical expertise to adjust and expand our range of products accordingly.



Patrick Zurbuchen, Head of Sales Group

GEMÜnews: Mr Zurbuchen, GEMÜ was a pioneer in the plastics sector. Fritz Müller invented the plastic process valve and created an entire market around this. Does GEMÜ want to go back to its roots?

P. Zurbuchen: In fact, we were the technological leaders in the plastics sector at that time. These days, it is true that we are perceived as a highly competent manufacturer in the plastics sector, but our market shares are low when compared to some of our competitors. In this sector too, we have to measure our product range and our service promise against the demands of the market and, if required, adapt these. We are already on the right path – the SilverLine® series and the R-series are enjoying a high level of acceptance in the market and are being continuously expanded. With our Production and Logistics Centre, which is currently being built in Waldenburg, we are laying the logistics groundwork for the future, while our new cleanroom manufacturing plant in Emmen in Switzerland houses the latest generation of injection moulding machines with which we are arming ourselves for the manufacturing technology of the future.

GEMÜnews: The Food and Beverage sector is extremely complex, highly fragmented and contains lots of medium-sized companies, from the dairy through to the industrial bakery. How is GEMÜ going to break into this market?

P. Zurbuchen: The Food and Beverage market is not new for GEMÜ and for many years now we have achieved excellent results and our customers are extremely satisfied with our expertise and performance.

It is not our objective to become a full-service provider for the Food and Beverage market. Instead, it is more important to us to concentrate on promising niches in the market. Our stainless steel diaphragm valves, when used as filling valves, offer, for example, the advantage that fruit particles are not damaged. This leads to fruit juice of a much higher quality and thus offers competitive advantages for the manufacturer. Our strength lies wherever individual special solutions are required – and we want to become even stronger in this area.

GEMÜnews: We are hearing that the Food and Beverage market is changing. Where can you notice this change?

P. Zurbuchen: We are witnessing significant growth, particularly as a result of trends in the functional food sector, i.e. for food with health-promoting additives and the overall increasing global need for food.

And we are also noticing the increasing demands for hygiene and safety. In this way, this market is becoming slightly more similar to the pharmaceutical industry. We can, of course, draw on our experience as a global market leader for sterile applications, and make the most of our expertise in order to create added value for customers in their plant.

GEMÜnews: Mr Zurbuchen, thank you very much for talking with us. ■



GEMÜ 660 aseptic diaphragm valve

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Expertise in Plastics

The GEMÜ Mould Making Department

The Mould Making Department at GEMÜ manufactures injection moulds in a highly automated manufacturing centre - including for customers and manufacturers of plastic parts.

Individual process steps such as measuring, milling and spark eroding are combined and put together in a structured and automated form as part of a compact manufacturing centre. It sounds simple. And yet the idea is new to mould making and somewhat out of the ordinary. "But that's how we do it at GEMÜ", says Ralf Herrmann, Head of Mould Design and Tool Manufacturing at GEMÜ – pointing confidently towards the "Mould Centre" of the Tool Manufacturing department.

Fully automated manufacturing centre

As a fully automated plant, only a few actions are still performed manually outside of the process. For example, the milling cutters used in the machining process are still individually measured in advance and shrink-fitted. At the same time, an employee measures the workpieces to be machined and the unmachined electrode parts on a pallet and enters the data into a job management system which controls and monitors all further steps on a fully automatic basis. As if by magic, a linear robot places, for example, a palette containing a particular workpiece in the working chamber of a machine according to the priorities which have been set - and thus starts an order. Working at up to 42,000 revolutions per minute, a HSC milling cutter machines a graphite electrode for an individual tool part. After machining, the electrode is automatically checked on a CNC measuring machine, placed in a magazine and thus forwarded on to the next machining step. Even hardened workpieces are given their final contours and functional surfaces in this manufacturing centre. The milled graphite electrodes are switched into the spark eroding machine together with the matching workpiece and machined according to the workflow. At the end, the finished machined parts are once again measured automatically against the CAD data and the system checks whether the machined part matches the design. It is a sequence of operations which provides a foretaste of "Industry 4.0". "A system with this level of networking and compactness is very rare and we often get visits from interested companies who want to have a look at our solution", says Ralf Herrmann.

The "jewel in the crown" of Mould Making

The "Mould Centre" is the jewel in the crown of the Tool Manufacturing department at GEMÜ. This department belongs, in turn, to the Precision Technology division and is specialized in the manufacture of injection moulds for plastic parts, elastomers, thermoplastics and die cast aluminium. Mould making has been carried out at GEMÜ since the company was founded by Fritz Müller and the invention of the plastic valve. Right from the beginning, the company has developed and manufactured tools for plastic valves in-house. Today, the highly modern and CIM-controlled department has an industrial structure and a great deal of potential. "Here, we can develop and



manufacture production tools for customers and even for other manufacturers of plastic parts. If necessary, we can even produce plastic parts with a shot weight of up to 2,000 g", says Herrmann Walter, Head of Production and Logistics at GEMÜ, the division which the Precision Technology and Mould Making departments belong to.

Expertise right from the start

The division has its own design department with five design engineers. They are equipped with sophisticated CAD programs and simulation processes (MOLDFLOW) for injection moulds in 3D. Using this expertise, developments can be tested for their feasibility and improved. "We always carry out an injection mould analysis and, after completion of the tool, we produce a First Article test report with SPC evaluation for the plastic part in our injection moulding department", explains Ralf Herrmann. The sample testing process using the original material can also be carried out under cleanroom conditions.

Adjusting flexibly to customer requirements

Thanks to our comprehensive data network and modern stock of machinery, we are able to transfer the geometric data from our design department to the CAM programming system without errors, which ensures quick and cost-efficient production. "With our 5 design engineers and 16 skilled toolmakers, we are able to adjust flexibly to customer requirements and are also in a position to fulfil special requests", explains Ralf Herrmann while showing us a plastic cover for a kneecap implant made for a manufacturer in the medical industry. And the tool for a computer fan. GEMÜ has also already supplied the tool for a silicone part for BMW. "We are open to new challenges and will take on anything that is possible in the area of mould making for injection-moulded plastic parts", says the mould making specialist. The team has particular experience in the area of thread moulding, metal inserts, overmoulding of metal parts, lining of metal bodies and tools for glass-fibre reinforced plastics and fluoroplastics (PFA/PVDF). ■



Mould centre for automated HSC milling, spark eroding and measuring

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Explanation of terms

- ⇒ CIM = Computer Integrated Manufacturing, a computer controlled sequence of different manufacturing steps
- ⇒ CNC = Computerized Numerical Control, an electronic method for controlling and regulating machine tools
- ⇒ CAD = Computer Aided Design. This refers to the design of products using computer systems
- ⇒ CAM = Computer-Aided Manufacturing. This refers to the use of a software program which is independent from the CNC machine to produce the manufacturing program
- ⇒ HSC = High Speed Cutting. In the field of metalworking with CNC milling machines, this refers to a machining process whereby the cutting speed is many times higher than in a normal machining process due to extremely high tool rotational speeds and feed rates
- ⇒ Industrie 4.0 = The factory of the future whereby machines monitor and organize themselves through cyber-physical systems, manage themselves in production facilities and communicate with each other worldwide

GEMÜ R647

The GEMÜ 647 2/2-way plastic valve has been revised and is now available as R647 with optimized body geometry. The valve is especially suited - like its predecessor - to use in dyeing plants, in automatic animal feeding installations or for use in the paper industry. In addition, GEMÜ

R647 will be used wherever there is no need for a closing spring, or where the installation conditions require small components. One benefit of the new type is the similarly high Kv value with a smaller actuator size. The R647 is therefore more compact and reasonably priced than its predecessor. The valve can also be supplied in an intermediate size, the new diaphragm size 20. This new feature also means that additional space and cost savings are possible in plastic piping systems. ■

GEMÜ R647



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GEMÜ iComLine

For the handling of critical fluids

GEMÜ presented its new iComLine valve block product range at this year's SEMICON in Silicon Saxony (USA). It completes the established GEMÜ CleanStar diaphragm valve range. These innovative, high performance and resource saving 2/2-way globe valves are both available as single valves and as multi-port valve blocks. They are resistant to chemicals and high temperatures (up to 150 °C), have a low pressure loss and offer minimal conta-

mination. Their compact size saves space and their internal seat size options reduce costs. They are low maintenance valves and also suitable for cleanroom production installations. Their bodies can be supplied in a broad range of standard or specialized plastic materials. The areas of application range from the foodstuffs and biotechnology industry right through to the silicon chip industry. ■

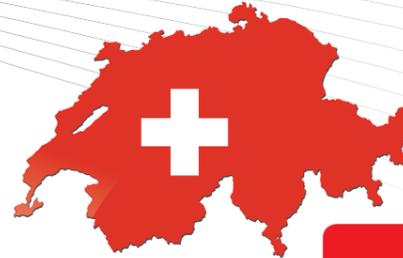
GEMÜ C50



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Prevention is better than cure!

GEMÜ Switzerland personnel work



Health promotion as part of internal training, as a voluntary offer, is very popular at GEMÜ Switzerland.

The Swiss refer to "a feeling" when they think of so-called soft factors. Factors which are needed for a balanced life just as much as the hard, touchable cornerstones of our existence. Due to a wide range of reasons, both professional and private, the balance required for this can become unstable. Burnout syndrome can be a consequence. Then, we have to be cured. However, prevention means having a work-life balance in sight, which means reconciling private and professional life. Companies can help employees to do this. In May 2012, the management of GEMÜ Switzerland started a comprehensive training programme, which was sent out to all 150 employees. In addition to various other topics, work-life balance was also addressed. To do this, a trainer who specializes in the balance between work and private life supported GEMÜ health care on-site. GEMÜnews interviewed Corinne Bütler, Personnel Manager for GEMÜ Switzerland.

GEMÜnews: What benefits will you gain from it as a personnel manager?

C. Bütler: I think it is fundamentally great that, in this way, we can let employees know that they have a contact point, if required. It benefits us much more as a company if someone contacts the trainer, or us, rather than burning out. The discussions are individual coaching sessions, meaning that they are discreet, on neutral ground, and in a very relaxed atmosphere.

GEMÜnews: It is not always that easy to ask for help. How were the offers accepted as a first step?

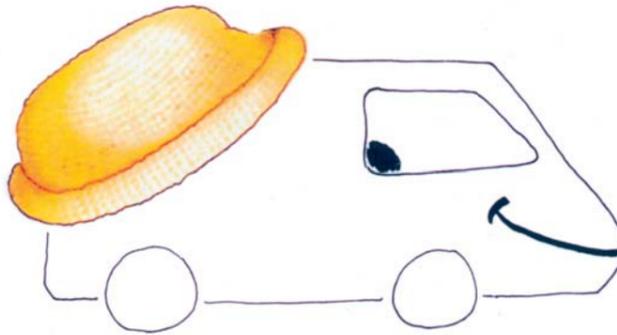
C. Bütler: 20 applications show us that we were right on target with them. There was a lot of interest and the feedback from participants was consistently positive. Around three months after the day course, we ran a so-called infomobile day. The trainer was once again on-site with her infomobile, and was available to all employees. This was also actively used.

GEMÜnews: And how does the training work?

C. Bütler: The course is specifically combined with e-learning. Prior to the day

“ During the course, I was shown what I can do for my work-life balance. I also find it important to recognize that you should also accept other lifestyles. Everyone has their own way. ”

Alberto Sandrini, Head of Tool Production at GEMÜ Switzerland



course, the participants obtain login data so that they can read some documents as preparation and complete a questionnaire about their well-being. This is confidentially evaluated by the trainer and provides her with a basis for the course. Thanks to this knowledge, she can then react better in the training and in possible follow-up discussions.

GEMÜnews: And how does it continue?

C. Bütler: The new GEMÜ Switzerland training programme for 2013 has been set: topics such as polymer science, new technologies, PowerPoint and, of course, work-life balance again, are on offer for employees. There is therefore a good mix of soft and hard factors, in order to help optimize the organization of everyday work and life! ■

The "Work-life balance" INFO DAY was at GEMÜ Switzerland on 31.08.2012.

In the on-site infomobile on Lettenstrasse, GEMÜ employees could have an initial short discussion, get information from specialist literature and enjoy healthy drinks, without alcohol of course.

⇒ more information can be found at www.familienmanagement.ch



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What do you like about GEMÜ?

Wolfgang Wick



⇒ Starting out at GEMÜ:

Wolfgang Wick has been with GEMÜ for 35 years. He started out as a young skilled worker in the tool manufacturing department in 1977.

⇒ Career at GEMÜ:

Between 1987 and 1989 he attended vocational training to become a foreman.

⇒ Today at GEMÜ:

Wolfgang Wick is Head of the Special Engineering department and Training Manager Metals.



Wolfgang Wick: "What I like about GEMÜ is the personal and family-like atmosphere which still exists today despite the company's size. Over the last 35 years, I have been through many highs at GEMÜ – and, of course, a few lows, too. I have a good recollection of the big fire of 1981 and the flood of 1993. On both occasions, the entire workforce stuck together. After the fire, for example, many people worked day and night to set up a tent and get production up and running again as quickly as possible. Mrs. Müller brought us sandwiches at

10 o'clock at night, and Fritz Müller was ever-present and did a lot of the work himself. After the flood, the business administration people were outside in the yard scrubbing parts alongside the technical workers. Those were unforgettable experiences that brought us together. Our boss still knows his people by name. It's fun to work here - you have a sense of belonging. Over the years, I have gained experience and today this is a valuable asset. That's why I'm not even considering retirement.

What I like in particular about GEMÜ is the work with trainees, the short distances from A to B, and the sometimes unconventional and non-bureaucratic working approach. Here, we work on a mutual give-and-take basis. We help and support one another. If you have been with the company as long as I have, you of course know everything inside out - the people, the processes and the

products. You grow up with them and I've developed good relationships with my colleagues.

Another thing I like is that GEMÜ is always open to new ideas and developments. In fact, it is even encouraged and supported. This motivates you and instils in you a firm belief that you can achieve things at GEMÜ." ■

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GEMÜ adopts Green IT and saves up to 90 percent on power costs with a new server structure

GEMÜ is saving energy with energy efficient computers and monitors as well as by virtualising its server environment.

Is it even possible to make major savings in IT? Matthias Mix gives a straight answer: "Yes!", said the Team Leader IT Infrastructure and Office Applications. Furthermore, this can be achieved on not one, but two levels. Firstly, by investing in energy efficient equipment. And, secondly, by careful analysis of equipment utilization and by making optimal use of available resources and capacity through virtualization.



GEMÜ goes green - even with its IT

In hardware terms, the way forward is to "go green". Although this involves somewhat higher initial expenditure of about 100 euros per workstation, in return these computers save enormous amounts of power. "The new hardware components will in future use zero power during downtimes", Matthias Mix explained. The current generation of computers, for instance, burns about 2 watts of power per hour even when they are switched off. With around 450 computers in use at the company headquarters and at the GEMÜ Dome, this adds up to a good three-figure sum over the course of a year. The situation as regards monitors is similar. "We are switching over to LED technology for our new monitors. They use about 50 percent less power", Matthias Mix said.

Downsizing from 80 to four

The new server structure makes big savings. According to studies, servers usually run at only 15 percent capacity. "85 percent of the time they are generating hot air", Matthias Mix said. GEMÜ has solved the problem by using virtualization software. This software utilizes existing server capacity and distributes tasks in such a way as to make optimum use of the servers, thereby allowing the hardware requirements to be drastically reduced. "At peak times we pack the power of the previous 80 servers into four servers", Matthias Mix explained. Fewer servers also means less in the way of ancillary hardware and cable clutter, which in turn saves space and, most importantly, reduces server and cooling power consumption. Matthias Mix calculates that "virtualising the server environment cuts our energy bills by about 90 percent".

This also has other benefits such as higher server availability, resulting in smoother and more efficient business workflows. Data is stored smoothly and without interruption and can be quickly recovered after a machine or process failure. Users can access virtually any standard desktop system or laptop via the network. And, finally, a virtualization layer allows us to respond more quickly to market changes using Dynamic Resource Management. ■

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Helping to save the environment GEMÜ employee drives an electric car

Since August 2012, GEMÜ employee Thomas Specht has been the proud owner of an electric car, which he drives to work every morning.

Thomas Specht made all heads turn the first time he drove his Renault Twizy into the company car park. Why did he decide to buy an electric vehicle? "Fuel prices, taxes and insurance premiums are going in one direction only - and that's up. Also, it's becoming more difficult to find parking spaces. Being an environmentally conscious person, I said to myself, "Just talking is not going to help the environment - you have to act", he said.

A charismatic midget

Before going electric, Specht drove a Mercedes-Benz E-class for years. Nevertheless, he says the eye-catching midget is fun to drive. There is plenty of room in the back for a passenger. And the Twizy is more than big enough for routine shopping trips. It comfortably holds two full-size crates of water. "The vehicle is well built and surprisingly quick," he said. It has a top speed of 80 kilometres an hour (50 mph). This is more than adequate for everyday running about. Above all, it is very quiet. "Apart from the purring of the electric motor, it doesn't make a sound". However, this means he now has to pay even more attention to pedestrians. This is because they can't hear him coming and sometimes step onto the road without looking.

Thomas Specht has upgraded the car for the winter. The basic model does not have doors or windows. He's now had these fitted.



Gert Müller and Thomas Specht with his Renault Twizy

'Refueling' free of charge at GEMÜ

Thomas Specht is fully behind the "Green Engineering" initiative and, of course, is delighted about the new charging station, where he recharges his electric car every day for free. "It's great", he said. There is now a Green Engineering sticker on the doors of his Twizy. And he is proud to work for a company that does more than just pay lip service when it comes to the environment and sustainability.

He recommends that his colleagues switch to an electric vehicle. "Admittedly, the Twizy is for enthusiasts only. But there are, of course, other electric cars to choose from", Specht added. ■

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Current training dates 2013

- ⇒ **Technical principles of valve technology**
7 and 8 January 2013 (German)
4 and 5 February 2013 (English)
22 and 23 April 2013 (German)
- ⇒ **Service trainer "Diaphragm replacement"**
28 and 29 January 2013 (German)
15 and 16 April 2013 (English)
2 and 3 May 2013 (German)
- ⇒ **Product training for valves and accessories**
14 to 16 January 2013 (German)
6 to 8 February 2013 (English)
6 to 8 May 2013 (German)
- ⇒ **Technical principles of measurement and control systems**
10 January 2013 (German)
2 April 2013 (English)
25 April 2013 (German)
- ⇒ **Product training for measurement and control systems**
21 to 23 January 2013 (German)
3 to 5 April 2013 (English)
13 to 15 May 2013 (German)

Training dates for the second half year 2013 will be stated in the next edition.



Top performance in training Trial audit passed

GEMÜ has been the first company to take part in the pilot project "Dualis- ausgezeichnete Ausbildungsbetrieb" (Dualis excellent approved training company) organized by the Heilbronn-Franken Chamber of Industry and Commerce. The auditors confirm high quality in occupational training.

This year, the IHK Heilbronn-Franken started the pilot project "Dualis- ausgezeichnete Ausbildungsbetrieb". The aim of the project was to create a company seal of quality. The focus was on examining the state and quality of occupational training.

Auditors were extremely satisfied

The trial audit took place at GEMÜ on 19 April 2012. Four auditors from different companies as well as an auditor from the Heilbronn-Franken Chamber of Industry and Commerce examined the quality of the training based on the 66 test questions from the criteria catalogue. The high quality of occupational training at GEMÜ and the above-average training activities impressed the auditors. Particular attention was paid, for example, to the trips and time spent abroad or the organization of various different projects. The audit was passed with

flying colours. The auditors were particularly struck by the excellent preparation and the high level of interest shown by the trainers and the heads of human resources and management at GEMÜ.

Innovative training

What motivates us at GEMÜ is to continue to optimize highly qualified occupational training. We want to provide our apprentices with innovative training through further projects in the future. ■

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Personnel officer/
Personnel marketing
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Apprentices now have their own homepage

A new feature at GEMÜ is a homepage (German language only) which has been created specially for apprentices.



At www.ausbildung.gemue.de you will find everything you need to know about all aspects of training, such as vocational careers and who to contact. You will also find details of current apprentice activities and events as well as guidelines for applicants. Fabian Kozok and Natalie Neumann are currently responsible for the apprentice homepage project.

page at www.ausbildung.gemue.de or at www.gemu-group.com in the Training and studies section. It is definitely worth checking out.

We hope you enjoy reading it! And please spread the word! ■

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Apprenticed as industrial clerks
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You can find the apprentice home-

GEMÜ stands for fairness

Work placements no substitute for full-time jobs

GEMÜ has associated itself with the Fair Company initiative and will be allowed to bear the logo in future. In so doing, the company is making one thing quite clear, namely that work placements are only offered for training and development purposes and are not used as a substitute for full-time jobs.

The "Fair Company" initiative was launched in September 2004 by the career portal www.karriere.de. At that time, the labour market for university and college graduates in many places was far from encouraging. Instead of permanent positions, poorly paid work placements and opportunities for work experience were often the only openings available. Since then, more than 1800 companies throughout Germany have joined the initiative. In order for an enterprise to become a "Fair Company", it must undertake to adhere to certain rules:

Fair Companies

⇒ do not replace full-time positions with student apprentices, unpaid trainees, people on unpaid work

experience or long-term temporary workers

⇒ do not oblige graduates who have applied for a permanent position to settle for a work placement

⇒ do not try to lure student apprentices with the vague prospect of a subsequent full-time job

⇒ offer work placements primarily for occupational orientation during the training phase

⇒ pay student apprentices an adequate expense allowance

⇒ inform student apprentices about the regulatory code and make them aware of the feedback address

⇒ are transparent and announce online their participation in the initiative



GEMÜ invests in the future!

Every year, around 10 young people complete their work placement at GEMÜ. The student apprentices receive comprehensive support and are given duties according to their skills and technical knowledge. After completion of their work placement, they are given a letter of reference. ■

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Exemplary exam results

GEMÜ apprentices receive awards

The 12 chambers of industry and commerce in Baden Württemberg recently honoured apprentices with the best exam results in a total of 118 trades. GEMÜ apprentice Stefan Frank won the 'Best in State' award in the category "Tool mechanic".

"Former" apprentices Fabian Beck and Stefan Frank had already taken centre stage at this year's awards for apprentices of the Hohenlohe district. Fabian Beck has completed an apprenticeship at GEMÜ as an information technology specialist, specializing in systems integration. He was nominated Best in District on the strength of his good results. Stefan Frank received several awards: Distinction, Best in District and Best in Region. Having achieved



Fabian Beck receives award as 'Best in District' IT specialist



'Best in State' tool mechanic Stefan Frank

the highest score of all tool mechanics, he was invited together with his trainer Wolfgang Wick to the 'Best in State' awards ceremony in Heilbronn on 20 November 2012, where he shared the spotlight with 117 other apprentices. The president of the Chamber of Industry and Commerce officially presented the graduate apprentice with a glass sculpture and certificate in commemoration of his excellent achievement. To finish top of his year from a total of 47,000 graduates is quite an impressive achievement!

Stefan Frank is one of two award winners from the Hohenlohe District. "The awards speak for the quality of the training we provide. But, of course, they also speak for the dedication and willingness of the

young people to learn and shape their own future", said Wolfgang Wick, Training Manager Metals at GEMÜ.

The career path of Stefan Frank continues at GEMÜ. He is now employed as a skilled worker in the Special Engineering department. His field of responsibility includes programming and operating CNC machines as well as the assembly, repair and maintenance of handling, assembly and test equipment. ■

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Wolfgang Wick
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Career openings for outstanding young talent GEMÜ at the 10th career day in Künzelsau



Since 2006, the recruitment and networking event “Career day for family-owned enterprises” has been running twice a year and was hosted this November at the Würth group in Künzelsau.

“One clear advantage of the career day is the opportunity to meet and talk individually with applicants who are especially interested in working for a family-owned enterprise”, says Heike Siegmeth, Head of Human Resources at GEMÜ. Approximately 2500 graduates, specialists and executive staff apply in advance for the event, of which 650 are invited to a personal interview on the day. Every applicant is given 45 minutes to hold an initial interview with the members of management and personnel who happen to be present.

Presentation of available jobs

GEMÜ is one of the more than 40 family-owned enterprises that take part in this career day. According to Heike Siegmeth, GEMÜ is happy to use this opportunity to hold initial interviews, to introduce the company and present

currently available positions. In comparison to large groups, family-owned enterprises have the benefit of direct lines of management and communication and flat hierarchies. In addition, the personal atmosphere is one of the great benefits of a company like ours”, states the GEMÜ personnel manager.

The candidates apply with a short CV that is evaluated by the organizers. Each company that is taking part receives the application materials and profiles of the selected applicants, from which they choose 30 interviewees. Both the companies and the applicants can then prepare for the 45-minute interviews in a more targeted way.

Successful first-round interviews

Candidates who create a particularly positive impression in the first round of interviews are invited to a second interview at the company. GEMÜ also held a number of successful first-round interviews at the career day, leading to a number of candidates receiving permanent contracts with the company. A



F.l.t.r.: Stephan Müller, Susanne Thoma, Heike Siegmeth, Lena-Kristin Sinner, Gert Müller and Ilka Rölke

welcome spin-off is also that smaller companies, like GEMÜ, are able to promote themselves, as the career day takes place at various locations around Germany. The host is always a family-owned enterprise. GEMÜ will also be taking part in the “11th career day for family-owned enterprises”, which is taking place on 28 June 2013 at Dr. Oetker KG in Bielefeld. ■

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GEMÜ is currently seeking ...

- ⇒ Managing Director (m/f) Switzerland
- ⇒ Staff members for international trade fairs (m/f)
- ⇒ Customer relationship management officer (m/f)
- ⇒ Production management assistant (m/f)
- ⇒ Internet coordinator (m/f)
- ⇒ Shift supervisor (m/f) for the polishing department
- ⇒ Maintenance staff member (m/f)
- ⇒ Semiconductor product manager (m/f)
- ⇒ International sales staff member (m/f)
- ⇒ Team leader, CNC programming (m/f)
- ⇒ Sales engineer, Upper Bavaria (m/f)
- ⇒ Development engineer, electronics software (m/f)
- ⇒ Laser welding system staff member (m/f)
- ⇒ CNC milling technician (m/f)
- ⇒ CNC turning technician (m/f)
- ⇒ Surface processing staff member (m/f)



USA perspective

Bianca Helis (23), industrial management, specializing in supply chain management

At the career day in November 2011 I had an interesting conversation with Ilka Rölke, Head of Vocational Training. Previously I had never heard of GEMÜ. Before the career day I looked up the company and was immediately impressed with what I saw and the half-hour conversation I had with Ms. Rölke it only served to confirm this impression.

Before Christmas, GEMÜ then invited me to attend an interview in Criesbach. Following the interview I decided that I definitely wanted to join GEMÜ – in spite of an offer from a large company in Munich. GEMÜ seemed to offer the best career development opportunities, which was the main reason behind my decision. I also liked the fact that my future responsibilities were very clearly outlined: the launch of the “PSI-Penta” ERP system in the USA subsidiary.

I particularly liked the detailed training schedule for new employees and especially the flexible way in which interests and needs were taken into consideration during this initial orientation phase. My colleagues are all very friendly and willing to help and there’s a very good atmosphere at work.

Originally I come from Diepholz, a town with 16,000 inhabitants, between Bremen and Osnabrück. Due to the challenges of my new job, which I was very much looking forward to, the move has not been too difficult for me. To date, I have not regretted my decision to join GEMÜ – quite the opposite. I am looking forward to new challenges and hope that I will successfully accomplish what is required of me in working for a company like GEMÜ. ■



Bianca Helis



Manuel Schmitz

From Cologne to Criesbach

Manuel Schmitz (27), Master of Science, Business Administration

At the career day in November 2011, I had three appointments, one of which was a meeting with Ms. Siegmeth from GEMÜ. I had not previously heard of the company and was not overly familiar with this particular industry sector. The conversation with Ms. Siegmeth made a lasting impression on me and, after the career day, I decided to take a closer look at GEMÜ. It obviously took a few days to sort through the mass of information but then I decided to apply to GEMÜ in writing. On the one hand, this was due to the very positive impression I gained from the meeting I had and on the other hand, because the job was a very good fit for my training and very much like what I had envisaged doing.

My expectations have been more than met. The initial job orientation phase was very brief and it wasn’t long at all before I found myself working on actual specific projects. That is of course highly motivating and I have had excellent support from my work colleagues. Working in a team is great fun and there is a strong team spirit.

I am currently working as part of a multi-site team of experts in our subsidiary GVS in China to introduce the “PSI-Penta” ERP system. It’s a very demanding job, the success of which is primarily made possible by the support and excellent cooperation of our colleagues in Ingelfingen and Shanghai.

Moving from Cologne to the Heilbronn-Franken region has obviously meant making some adjustments and I have decided to live in Heilbronn. The town is obviously very different to Cologne, but the beautiful landscape, good wine and nice people make it a good place to call home.

I am happy about my decision to work for GEMÜ and am looking forward to my future responsibilities and projects in a global strongly expanding company with pleasant colleagues and innovative products. ■