

GEMÜ®

VALVES, MEASUREMENT AND
CONTROL SYSTEMS

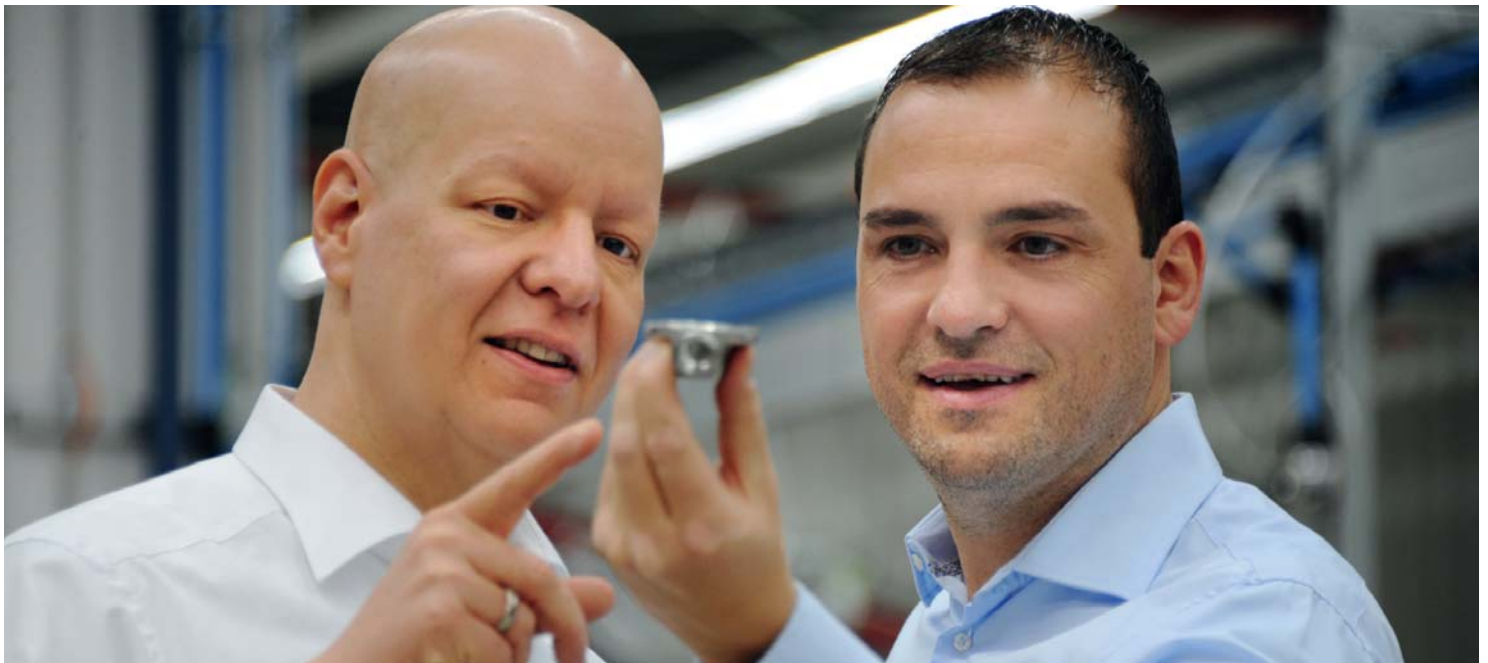
Components and system solutions
for complex applications and processes



Local roots, global network

*Our performance and passion for technology
make us the world market leader*





Managing Directors Stephan Müller and Gert Müller

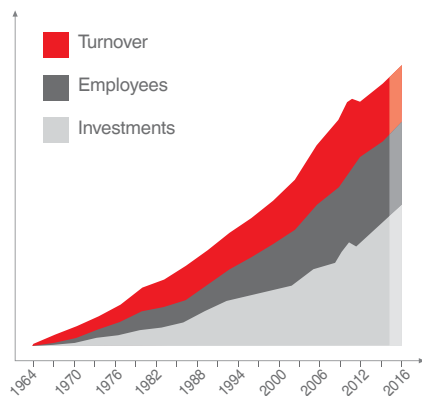
GEMÜ Group

1964
founded

over
1,700
employees worldwide

6
manufacturing sites

27
sales companies



GEMÜ company development

Through continuous innovative design and a focus on quality and proximity to customers, GEMÜ is one of today's leading worldwide manufacturers of valve, measurement and control systems. We are the global market leader for sterile applications in the pharmaceutical and biotechnology industries. GEMÜ has achieved this status by investing extensively in application-focussed research and development.

After more than 50 years of healthy growth, Gert Müller, son of founder Fritz Müller, now directs the independent family-owned enterprise alongside his cousin Stephan Müller.

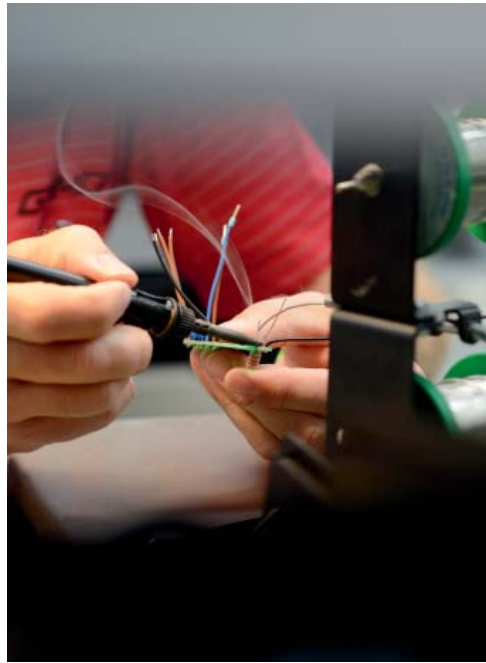
Technological leader

Fritz Müller's invention of the world's first plastic process valve formed the starting point for the company's foundation. This innovative strength remains just as strong today. Over the last two decades, customized GEMÜ multi-port valve blocks milled from stainless steel block material have had a significant impact on the plant engineering

industry. They make it possible to create plants that are considerably more compact while also being more flexible. Requirements of this kind are also becoming increasingly important in plastic plant engineering. Our decades of experience in stainless steel block design and manufacturing creates synergies that now also apply to the manufacture of plastic multi-port valve blocks. This expertise makes GEMÜ the technological leader in the field of complex plastic multi-port valve blocks.

Achieving more together

Our broad product range offers solutions for a variety of different customer groups. As a result, GEMÜ products must comply with the highest standards of quality and are developed according to current market requirements by our qualified employees on a daily basis around the globe.



Our range of services
for complex components and system solutions





From initial consultation, research & development, and the complete production process, right through to sales, service and maintenance – we implement the whole value chain, producing solutions that offer lasting maximum performance.

Over 1,700 specialists

The GEMÜ group currently employs over 1,700 employees worldwide, approx. 1000 of whom in Germany. The comprehensive range of GEMÜ products is produced at six manufacturing sites in Switzerland, China, Brazil, France, the USA and Germany. Research & development, design and the majority of the production and assembly are located in Germany. With 27 subsidiaries and a large network of commercial partners, GEMÜ is now active in over 50 countries on all continents.

Over 400,000 product versions

The wide-ranging modular system and the precisely configured automation components enable more than 400,000 product versions to be produced. This variety is unique to GEMÜ and provides an appropriate response to the increasingly specialized nature of process engineering.

From individual manufacture to major projects

We have flexible production structures in order to provide intelligent solutions to the individual requirements of specific industrial sectors and areas of application. Our capacities are capable of adapting to both individual products and all that is required for large projects.



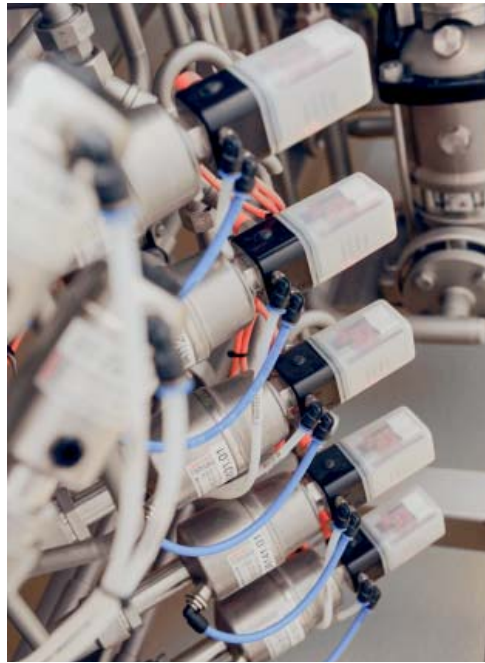
Precise: GEMÜ 554 – globe valve with customized regulating cone and positioner



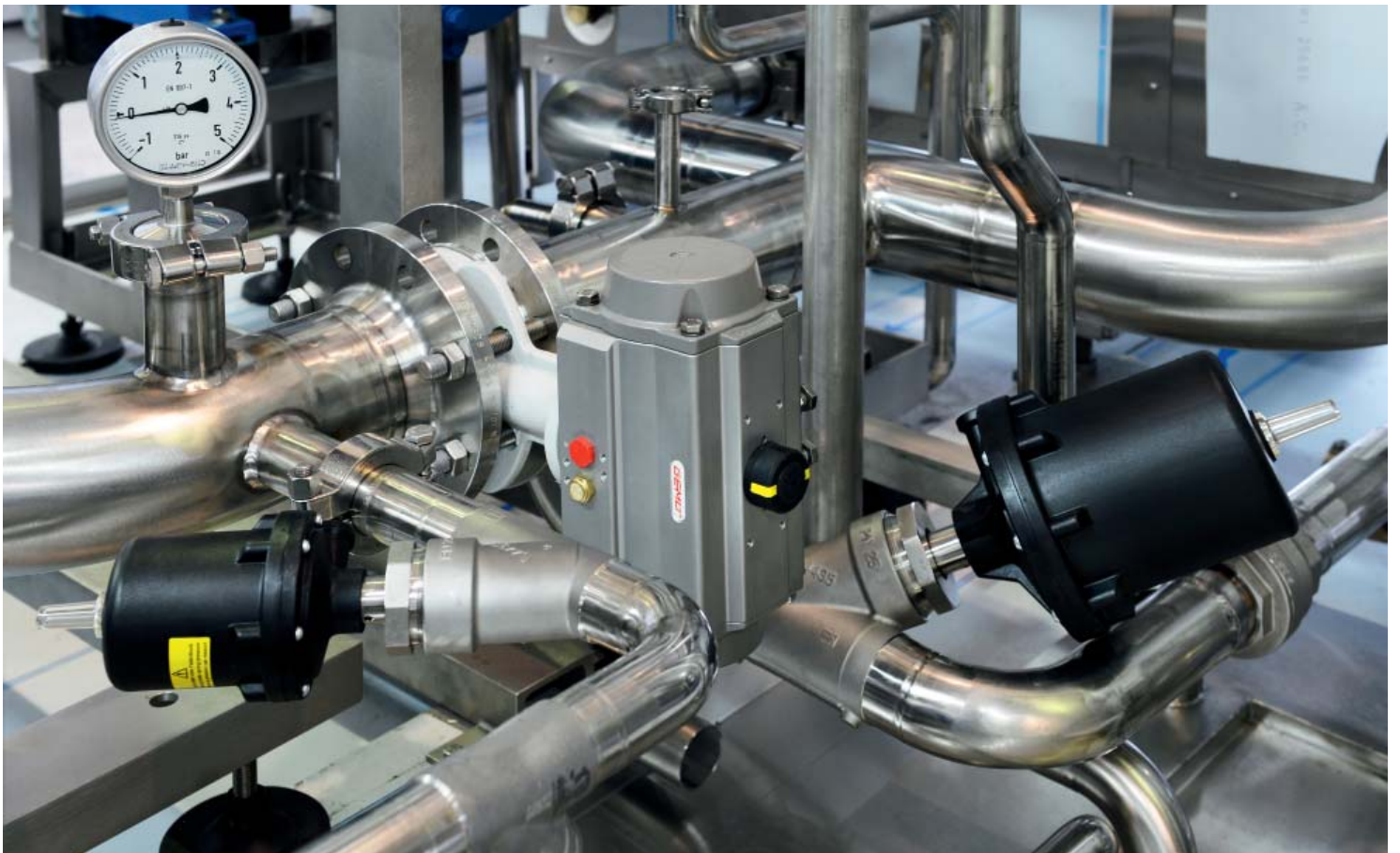
Tried and tested: GEMÜ 650 BioStar® – high-quality diaphragm valve for sterile and hygienic processes



Individual: GEMÜ M-block – customized multi-port valve blocks in plastic or stainless steel



Product and system solutions
for a wide range of requirements





Areas of application

- *Pharmaceutical, biotechnology and cosmetics industries*
- *Food and beverage industries*
- *Chemical industry and environmental systems*
- *Power generation*
- *Water treatment*
- *Processing industry*
- *Microelectronics and semiconductor industries*
- *Medical systems*

Valves, measurement and control systems by GEMÜ are used successfully in process engineering and adjacent fields of activity. Our system technology covers the complete process cycle: From individual standard components and tried and tested systems, through to customized product versions.

Creating value through innovative system solutions

Specialist technical design departments at GEMÜ develop application focussed system solutions and high quality components which make a significant contribution to the value created in plant engineering and in production.

By collaborating with our customers, our application engineers and technicians ensure that our products and further product developments are constantly influenced by current industry requirements.

Wide range of requirements profiles

Valves, measurement and control systems are subject to widely different requirements depending on the areas of application. Chemical and physical properties of the working media as well as other operating parameters have a direct influence on the selection of components and materials.

To do justice to the given operating conditions on an individual basis, we offer our customers a wide range of valve types, body materials, seal materials and connections. This facilitates the successful control and regulation of liquids, vapours and gases.



Pharmaceutical, biotechnology and cosmetics industries

Products

- Aseptic stainless steel diaphragm valves
- 2/2-way and T body valves, tank valves, tandem welded configurations, multi-port valve blocks and bypass valves
- Globe and control valves
- High-quality stainless steel actuators
- Customized solutions

Product advantages

- Autoclavable, sterilisable and minimal deadleg stainless steel valves
- All products are designed in compliance with GMP directives

Approvals and certificates

- Tested in accordance with USP Class VI
- Compliance with FDA requirements
- BSE/TSE compliant
- EHEDG-certified seal system for diaphragm valves
- TA Luft (German Clean Air Act)
- 3A-versions

The highest level of purity must be ensured when producing medicines and cosmetics. GEMÜ components and system solutions for the pharmaceutical, biotechnology and cosmetics industries meet the regulations and approval criteria for the manufacturing processes of these products.

Continuous improvement

The quality of these processes has been improved in particular by aseptic sterile valves and highly efficient multi-port valve blocks, with which GEMÜ leads the market. A GEMÜ multi-port valve block makes plants smaller, more compact, lighter and easier to clean. Each multi-port valve is designed and manufactured individually by GEMÜ on the basis of the plant-specific requirements. To date, several thousand variants have been produced for a variety of customers.

Always the right valve

GEMÜ diaphragm valves are used in all the fields of application in green, red and white biotechnology. They control the manufacture and filling of eye ointments, insulin, monoclonal antibodies and many other pharmaceutical active substances. The most notable feature is the certified GEMÜ seal system. It improves and reduces the purification process.





Food and beverage industries

Products

- Aseptic diaphragm valves
- Globe and control valves
- Automation components
- Product solutions for machines and plants for filling, cleaning, mixing, separating, sterilising, autoclaving, pasteurising, etc.
- Customized solutions

Product advantages

- Easy to clean
- Easy to service

Approvals and certificates

- EHEDG-certified seal system for diaphragm valves
- EC regulation 1935/2004

GEMÜ valves have been developed for aseptic and hygienic processes. They are used in the production of yoghurt, sugar solution, fruit juice and smoked products, as well as the filling of bottles containing water, soft drinks and dairy products. The individual production processes are as varied as they are complex: injection, peeling, heating, boiling, smoking, cooling, filling, homogenisation, mixing, separation, sterilisation, autoclaving, pasteurisation, cleaning (WIP/CIP/SIP), degassing and drying. Across this spectrum, GEMÜ offers the right valves for the precise control of liquids, gases, smoke and steam.

Certified diaphragm seal

GEMÜ is a member of the "European Hygienic Engineering & Design Group" (EHEDG). The GEMÜ seal system for diaphragm valves has been EHEDG-certified since June 2006. The diaphragm seal is at the heart of every valve. It hermetically separates the actuator from the body and enables optimal cleanability.





Chemical industry and environmental systems

Products

- Diaphragm valves and globe valves as well as ball valves and butterfly valves in plastic
- Lined diaphragm valves
- Highly resistant butterfly valve GEMÜ 490 Edessa®
- Multi-port valve blocks in PP, PVC, ABS and PVDF

Product advantages

- Different valve types as well as instrumentation and automation components directly from the manufacturer
- Large variety of valve body materials
- Numerous seal materials
- Special products for higher pressures and temperatures with corrosive media

Approvals and certificates

- ATEX
- TA Luft (German Clean Air Act)

The varied processes in industrial chemicals plants have stringent requirements for the valve technology employed. High temperatures, high pressures and critical working media require very specific valve solutions and components.

Diaphragm valves, which are especially suitable for corrosive media, can be precisely adapted to the working media by means of various diaphragm materials. In addition, the diaphragm valves can be lined with high-tech plastics, for example, PFA or PVDF. This combines the resistance of plastics with the robustness of industrial valves. This flexibility regarding material selection ensures maximum process and plant reliability, thus providing optimum customized solutions for:

- Electroplating
- Filtration
- Neutralisation
- Distillation
- Biodiesel production
- Paper manufacture
- Chromatography
- Fertiliser production





Power generation

Products

- Butterfly valves in metal and plastic
- Ball valves in metal and plastic
- Plastic diaphragm valves
- Lined diaphragm valves

Product advantages

- Three operator types available
- Great variety of valve body versions: 2/2-way, 3/2-way, multi-port valve blocks

Approvals and certificates

- ATEX
- TA Luft (German Clean Air Act)

The versatile options produced by the intelligent combination of valve solutions and automation technology provide the optimal prerequisite for the different areas of application in power generation. These include, for example:

- Hydraulic control of wind power plants
- Filling large batteries
- Automatic control system for cooling circuits in power stations
- Biogas plants
- Bioreactors for algaculture
- Flue gas desulphurization plants
- Pumped storage plants
- Refuse incineration plant

Robustness and long service life

GEMÜ has the optimal solution for these specific applications – from standardized products through to customized designs. Our products can be monitored by means of a central or a local control unit and offer the option of controllability. GEMÜ provides robust and durable components for harsh environmental conditions and adjusted process systems for efficient plant design.





Water treatment

Products

- Butterfly valves in metal and plastic
- Globe and control valves in metal and plastic
- Check valves
- Gate valves and knife gate valves
- Ball check valves

Product advantages

- Insensitive to particulate media
- Customized design
- Space-saving multi-port valve blocks

Approvals and certificates

- DVGW
- ACS
- WRAS
- Compliance with FDA requirements

Water is valuable and becoming increasingly scarce. People and agriculture need a safe, secure water supply. On the other hand, the supply of process water for energy production and industry also needs to be safeguarded. These tasks are performed by water treatment plants. The GEMÜ product range can provide numerous components for these plants: butterfly valves, diaphragm valves, globe and control valves, ball valves as well as measurement and control systems. The products have a long life, are robust and have been optimized for their specific application.

A wide field of applications with great flexibility of use

The field of applications covered by GEMÜ's product range starts with control and regulation of heavily contaminated sea, river and brackish water and extends to ultra pure water production in the semiconductor and pharmaceutical industries. The broad range of GEMÜ products enables huge flexibility in use. This applies as much to small, mobile drinking water treatment plant as to large-scale stationary sea water desalination plant.





Processing industry

Products

- *Globe and control valves*
- *Butterfly valves*
- *Diaphragm valves*
- *Ball valves*
- *Solenoid valves*

Product advantages

- *Great variety of valve body materials and seal materials*
- *Automation options*
- *Customized design*

Approvals and certificates

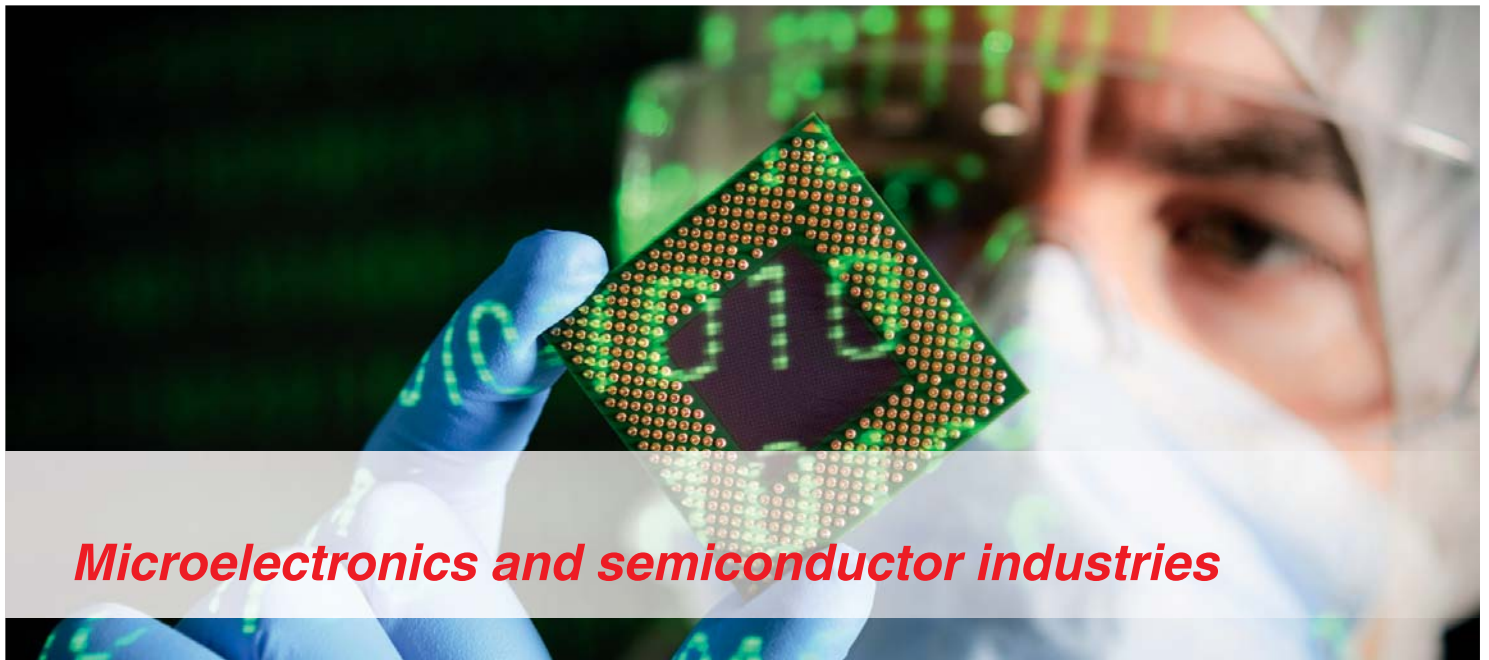
- *ATEX*
- *EC regulation 1935/2004*

GEMÜ offers the appropriate solutions for the majority of industrial applications in process engineering. The specific product range includes diaphragm valves, globe valves, butterfly valves, ball valves and solenoid valves, each available in metal or plastic versions. This range can be used, for example, in the production of textile dyes, foams for dashboard panels, car seats or platinum for jewellery. The wide range of applications makes GEMÜ valves reliable all-rounders.

Numerous application possibilities

GEMÜ products are working around the globe in industrial plant and machinery sectors, the automotive industry, water and waste water treatment, steel works, the paper industry, the petrochemical industry, mining and metal extraction, the sugar industry and in many other areas. No other area subjects valve bodies to such a varied range of stresses as those found in industrial applications. Which is why GEMÜ valve designs are based on the expertise gained during decades of application experience.





Microelectronics and semiconductor industries

Products

- Valves and measurement equipment made of PFA, PVDF, PP and PP natural
- Customized valve solutions integrating several valve seats, fittings, connections and sensor systems

Product advantages

- Manufactured under cleanroom conditions
- Space-saving
- Reduced installation time for multi-port valve blocks
- High resistance
- High flow rates
- Largely metal-free valves
- Various connection options

Approvals and certificates

- Standards Semi F-57-0301 2001 Specifications

GEMÜ has far-reaching experience and excellent references in connection with the use of valves in the semiconductor industry and other areas of application with high purity requirements. Our high purity solutions are developed in close cooperation with users, designers, equipment manufacturers and end users. They are produced at the manufacturing site in Switzerland under stringent quality control conditions and are used in treatment, supply and distribution of ultra high purity chemicals and ultra pure water.

The precision-adjusted, ultra-pure product range for critical fluid management includes the following products:

- **CleanStar®**: ultra high purity PFA valves, measurement and control systems
- **iComLine®**: PTFE/PVDF diaphragm globe valves and multi-port valve blocks
- **PurePlus®**: PVDF-HP and PP-HP diaphragm valves as well as PVDF-HP flowmeters
- **HydraLine**: pressure gauges with PFA pressure transmitters
- **SonicLine®**: ultrasonic flowmeters in PFA
- **FlareStar®**: PFA fittings
- **TubeStar®**: PFA tubing





Medical systems

Engineering and production partner

- Engineering of plastic components
- Cleanroom injection moulding and assembly
- Manufacture of RTS components
- Tool manufacturing and subassemblies

Certificates and options

- EN ISO 13485 and 14971 as well as MDD 93/42 EEC, 21 CFR820 and EU GMP guidelines
- Ageing test, packaging and transport validation, sterilisation validation and biological qualification

Valves, measurement and control systems

- Diaphragm valves, globe valves, ball valves, solenoid valves and butterfly valves with specific body materials, seal materials and grades of surface finish
- Multi-port valve blocks
- Compliance with all requirements of the pharmaceutical industry

Alongside the manufacture of valves, measurement and control systems for medical devices and hospital technology, GEMÜ is also an engineering and production partner.

As a supplier to medical technology companies, GEMÜ produces customized plastic solutions for surgical instruments, lab accessories and other medical devices.

Valves, measurement and control systems

GEMÜ valves are used in laboratory and analytical apparatus, amongst others, and in supply industries, for example water and air treatment for operating theatres. In addition, plants for cleaning and sterilising medical components are also designed using GEMÜ globe, control and diaphragm valves.

GEMÜ®
MEDICAL PLASTICS SOLUTIONS





Research & development Decades of innovative products



GEMÜ SUMONDO® – the world's first controllable single-use diaphragm valve

Customer benefits have been the main area of interest at GEMÜ from the outset. Our founder, Fritz Müller, set new groundbreaking standards with the very first product – a process valve made of plastic. It was approximately 80% smaller than the valves commonly available on the market and replaced metal with durable plastic. This was of enormous advantage, particularly for applications using corrosive process media.

invests in product optimization and new products and innovations. More than 5% of turnover is invested in research & development every year. The focus here is on the GEMÜ Dome Development and Innovation Centre in Niedernhall-Waldzimmern. Over 100 employees from research & development, design and product management are responsible for the respective product specifications at this location.

Reliable product classics

New technologies



GEMÜ 1436 cPos® and 1434 μPos® – electro-pneumatic positioners

In the last 50 years, GEMÜ has brought products to market that were, and still are, very popular. These products were and are being continually improved and optimized, leading to tried and tested, extremely reliable products, which, alongside completely new developments, represent a significant innovative factor at GEMÜ.

"An idea is only useful if you make something of it!" This motto coined by Fritz Müller continues to shape the technicians and engineers in different specialist disciplines today. They put new developments to the test and work on the latest technology. In the end, each product must pass the tests carried out in the technical centre, during quality control and, not least, on the market. Numerous series products have been and are being created through direct collaboration with customers. Special valves for individual, customized applications are being designed at the same time.

Research & development

In discussion with customers, development partners and educational establishments, GEMÜ continuously



GEMÜ 553 – modular globe valve configuration for industrial applications



GEMÜ 555 with mounted GEMÜ 4242 – pure steam valve with combi switchbox



GEMÜ M-block – multi-port valve block made of stainless steel



GEMÜ iComLine® – with innovative seated diaphragm technology

New standards

GEMÜ does not just implement new, expanded or modified standards in a targeted manner, but also promotes the development of these standards. As such, GEMÜ developed the IO link communication interface together with leading manufacturers of automation solutions, and is a founding member of the IO link consortium. Sensors and actuators can be controlled uniformly using this standard.

GEMÜ fitted the redesigned GEMÜ 1235 intelligent electrical position indicator and the GEMÜ 4242 combi switchbox with an IO link interface. This makes GEMÜ the first IO link device manufacturer in the valve and process technology sector. The new communications standard will now be implemented in other GEMÜ products.

Innovative solutions for process engineering

GEMÜ is constantly addressing new applications and markets so that it is always able to provide customers with solution-focused concepts. These are then brought to series production in collaboration with development partners and selected customers. One example of this is the world's first single-use

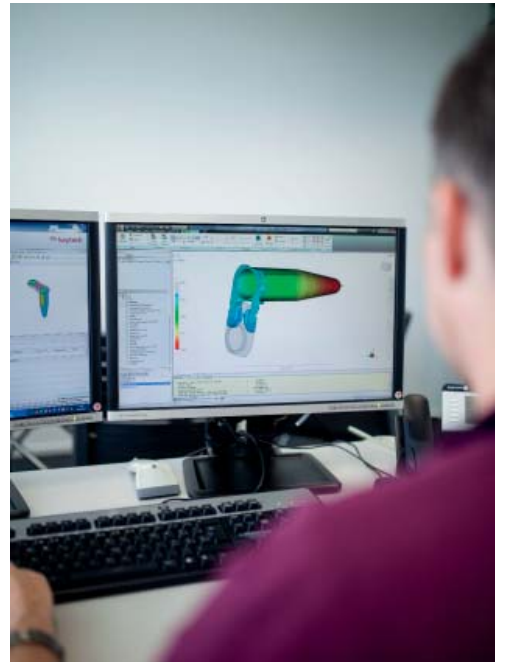
diaphragm valve, GEMÜ SUMONDO® for the control of single-use processes.

GEMÜ is the technological leader in stainless steel or plastic multi-port valve block solutions and continually expands the possibilities for their application. Since hygienic globe and control valves can now also be integrated into a bypass, for example, the design of the multi-port valve blocks has become even more variable. Furthermore, a variety of sensor systems and different actuators can be installed.

Alongside classic pneumatic or manually actuated valves, motorized valves have complemented the GEMÜ product range for two decades now. The latest generation facilitates even more efficient and completely precise control and regulation.

Modern manufacturing methods

Another innovative factor at GEMÜ is that manufacturing and assembly are continuously adapted to fit new and modified requirements. For example, GEMÜ is one of the first manufacturers to produce high purity valves under cleanroom conditions.



GEMÜ system solutions
*Consulting and engineering
for efficient production processes*





GEMÜ products are system relevant process components. They make a significant contribution to the safe and efficient operation of a plant..

Specialist advice

Selecting the correct valve and design is a prerequisite for the function and efficient operation of a plant. GEMÜ has the process engineering knowledge required to do just that. Our specially trained advisors have thorough knowledge of the market and examine our comprehensive product range with the customer to find the optimal solution for the relevant application. This ensures that the plant is operated under not just technically, but also economically optimal conditions. Consultants are able to rely on our technical competence centre for questions of technical detail. The engineers and technicians there are specialists in their field and work closely with customers to develop solutions to their problems.

Production planning

As a solutions provider, GEMÜ is equipped for a wide variety of requirements – from customized multi-port valve blocks with a batch size of one, to standard components with a batch size of 1000. Our flexible production planning is based on the customer's needs. Each of our six manufacturing sites is highly specialized, with modern assembly areas and state-of-the-art technology at their disposal. A modern IT infrastructure assists production in all areas, facilitates transparency in all procedures and thus ensures reliable scheduling. The higher our process reliability, the higher our customers' process reliability.

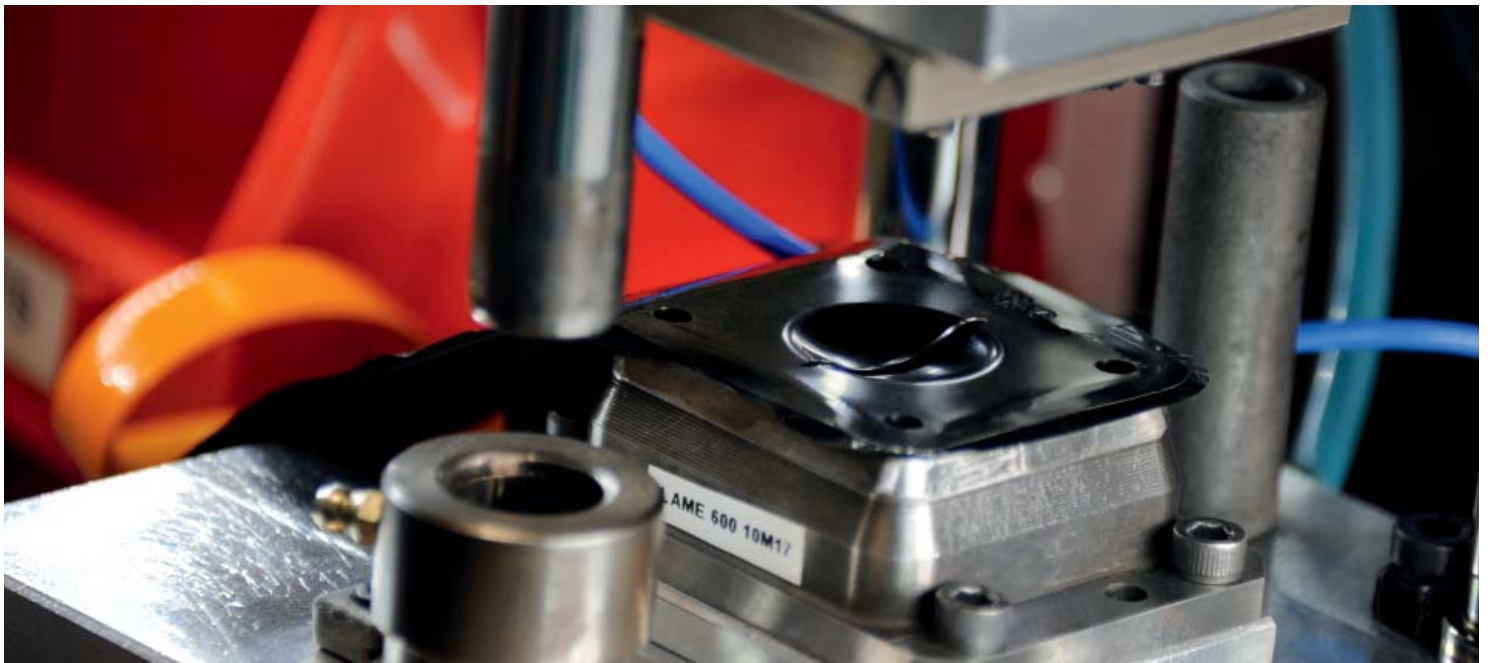
Customer-oriented development

Many product ideas arise as a result of proximity to our customers and knowledge of their needs. By focussing on the customer in conjunction and taking advantage of our engineering expertise, we are ensuring that, even in the future, we will develop the right products. Products in the early stages of development are housed in the GEMÜ Dome, a unique structure in which developers work on the next generation of technology. This is where customer requirements are transferred to product solutions and developed for market – always subject to the proviso of meeting special customer benefits.



Coordinated manufacturing processes
The highest quality right down the line





GEMÜ is a system provider that develops, manufactures and handles all measurement and control system components for complex processes. The variety of material and products involved covers numerous fields of application, and is unique to GEMÜ.

Materials knowledge and manufacturing capabilities

GEMÜ products are manufactured from numerous plastics and metals. Knowledge of their properties, quality and processing guarantees that our components and system solutions are of high quality. Thus for 20 years GEMÜ has processed an optimized PTFE mixture in the production of diaphragms for aseptic valves, for example, which has significantly increased the service life of diaphragms in most applications. This is the result of smooth interaction between research & development, technical departments, product management and the influence of a specific market requirement.

Efficient production control

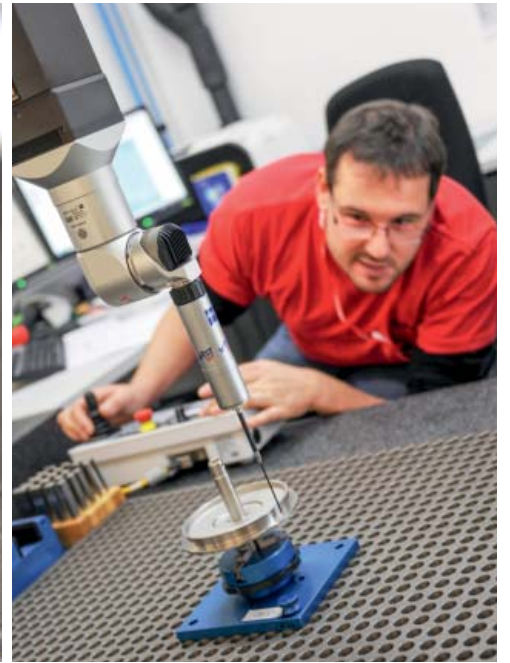
In the GEMÜ Group's production centres, manual manufacturing, partial and full automation go hand in hand. Robots, automatic welding machines, multi-axis CNC machines and other partially and fully automated systems are used alongside manual workstations. As part of the continuous improvement process, technicians, engineers and experts with many years of experience ensure that, in each case, products are manufactured in the most efficient and best possible way. Qualified employees in production control pay particular attention to the smooth interaction of automated systems and the pre-manufacturing and downstream inspection of devices, software and manufactured products. As a result, multi-port valve blocks are manufactured on multi-axis CNC machines using in-house programmes created specifically for this purpose, and they are then subjected to a 100% examination by trained personnel. The broad positioning, expertise and smooth interaction in GEMÜ manufacturing and assembly enables low volumes and customized products to be manufactured, in addition to automated series production.

Market-compatible focus on quality

As a manufacturer, GEMÜ sets the standards in terms of service life, robustness and reliability. This is due to our knowledge and understanding of the requirements and procedures involved in the processing industry. Ultimately, GEMÜ could serve many future markets already in their early stages of development, for example the semiconductor industry and the biotechnology industry, with groundbreaking solutions.

Close-to-market production

GEMÜ manufactures its comprehensive range of products in six countries on three continents: Germany, Switzerland, China, Brazil, France and the US. The majority of the manufacturing and assembly is performed at the German sites in Ingelfingen-Criesbach and Kupferzell. Market- and country-specific variants are manufactured at the other sites, for example products for the heavy industry in Brazil and valves for the local market in China.



Quality is the sum of all the parts
*Validated products and certified
manufacturing processes*





GEMÜ designs products that control and regulate their respective applications safely, precisely and reliably. In order to ensure proper control and regulation, quality assurance measures are defined and implemented with the entire manufacturing process in mind.

Product qualification and validation

The qualification and validation of new products, redesigns or product optimizations are of particular importance here. Simulations and thorough testing are carried out in GEMÜ's in-house technical centre prior to the sales launch, in order to meet market requirements. The processes can then be implemented in collaboration with specialists who have in-depth knowledge of the respective industry requirements.

In-house CIP/SIP test rig

In order to test diaphragm valves in cleaning and sterilisation processes under real conditions, GEMÜ has a CIP/SIP test rig at its disposal in the technical centre. This test rig makes it possible to test all diaphragm sizes in the most varied, customized cleaning and sterilisation processes. It allows the user to stipulate

the number of cycles and their duration, as well as the media; compressed air, hot water (up to 85 °C), cold water, vacuum, steam (up to 150 °C), acid, alkali and cleaning agent are all available. It is also possible to run specific test cycles and to determine the service life of diaphragms. Our customers therefore benefit from significant time savings due to low validation costs, for example. Process reliability is being increased at the same time.

A precisely coordinated manufacturing process

Incoming-goods, manufacturing and assembly procedures are controlled by a computer-aided quality management system (CAQ) at GEMÜ. For example, this system stores all the incoming goods and manufacturing test data, and manages the test equipment, including all calibration documents. Compliance with the specified processes is ensured by means of regular audits.

Modern machinery and optimized workstations (handling systems, documentation and assembly aids, etc.) enable our specialist technicians to design every manufacturing step in

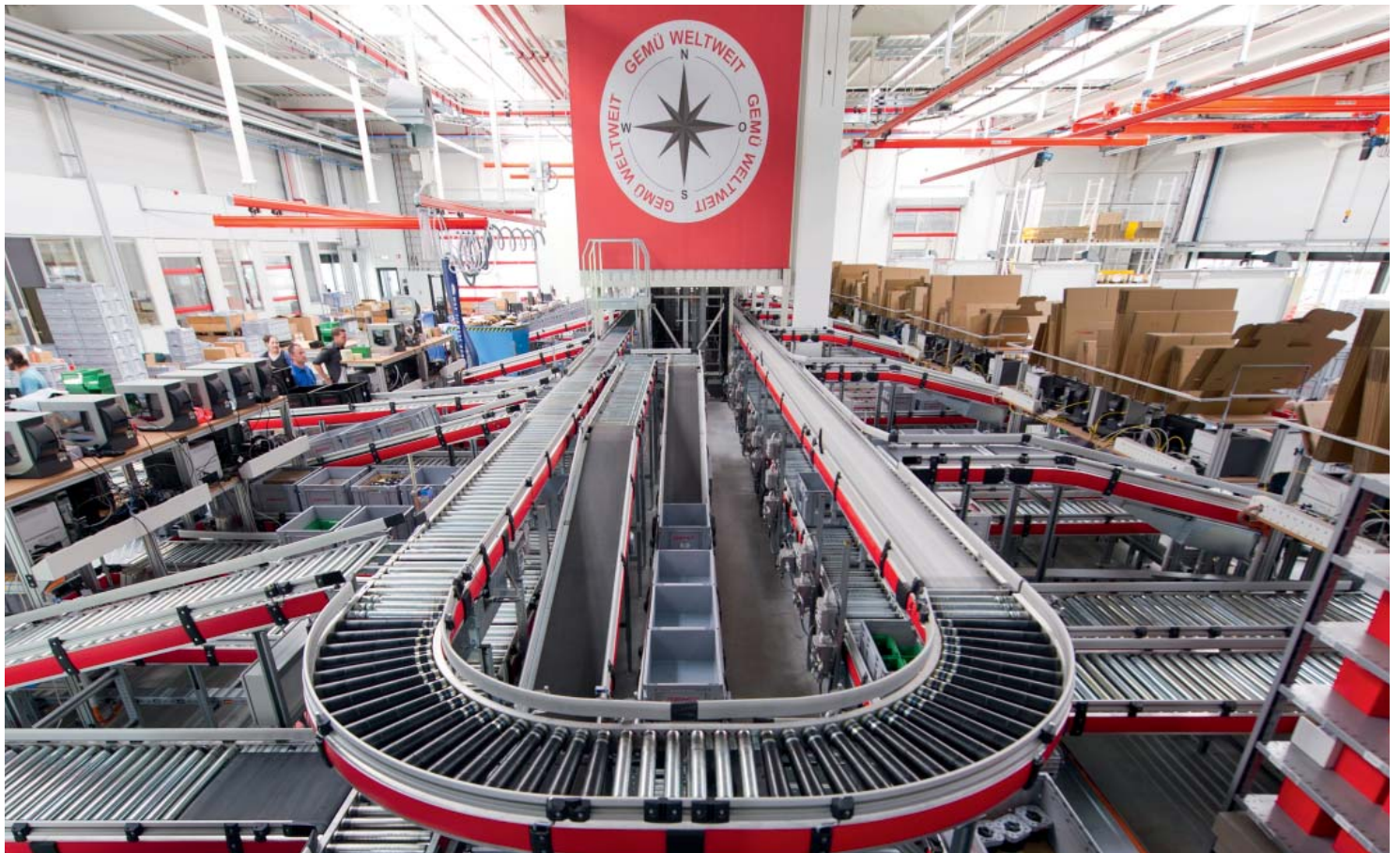
a practical and efficient manner and to minimize error sources. Specially constructed test rigs are also available for testing individual components or entire systems.

The manufacturing process for ultra pure valves, measurement and control systems and for medical industry products takes place in the cleanroom plant in Emmen, Switzerland. The site, which opened in 2012, manufactures products in accordance with EN ISO 14644-1 class 8 (in operation) and GMP class C.

Every effort is made to ensure the quality of each individual weld seam when manufacturing and producing stainless steel actuators and other stainless steel products. This endeavour is also reflected in our status as a DIN EN ISO 3834 certified welding company.



GEMÜ logistics capability
*Integrated processes for efficiency
and reliable delivery*





The European Production and Logistics Centre (PLZ-E) marks another milestone in the history of the company. In a globalized world, the significance of highly efficient logistics is growing. Highly coordinated stocking, assembly and delivery guarantee that GEMÜ products are supplied to customers around the world at the right time, in the right quantity and in the right place.

Reliable delivery from Europe to the rest of the world

The state-of-the-art building at the third German site stands for full process integration – from raw materials delivery, all the way through to dispatch to end users. Order-specific manufacturing, final assembly and testing of the components and systems all take place at this site.

The Production and Logistics Centre in Kupferzell represents a new era in Supply Chain design at GEMÜ. Prompt procurement is an important criterion for many customers. To improve on this, numerous assembly and dispatch processes have been thought out and devised. Products can therefore be delivered to customers more quickly and on a more personal basis.

Modular and process-oriented layout

Modular and process-oriented construction enables individual departments to cater for current and future requirements. Capacities can thus be shifted to individual departments and expanded where necessary.

The proximity of quality assurance, manufacturing, logistics and materials management ensures the optimum throughput of the individual components. The current manufacturing status of individual components through to the finished product can be tracked precisely throughout the process.

Production and logistics capability over 13,000 m²

The entire surface area available on the site is 100,000 m², 13,000 m² of which is currently occupied by production and logistics. Therefore, there is sufficient space available for future expansion. Automated intralogistics and a modern inventory management system make it possible to process up to 2000 customer transaction items and 1000 production orders per day.

Customer-oriented manufacture and packaging

A large number of standard components from the GEMÜ modular system are stored in the Production and Logistics Centre, and can then be individually collated and assembled according to customer requirements. This also provides the option to design customized packaging solutions.

Ergonomic and employee-friendly

GEMÜ places stringent demands on workplace design. For this reason, all workstations in the Production and Logistics Centre have been set up ergonomically, and labour-saving measures, such as partial automation, lifting aids and the relevant materials handling technology, have been introduced. In spite of modern communication methods and work equipment, the real focus is on personal interaction. The offices are therefore just a short distance away, directly adjacent to production, guaranteeing efficient work.



Superior service, superior quality
Our promise

Customer satisfaction

Customer satisfaction does not arise solely from the punctual delivery of a functional product. In reality, it comes from a whole series of factors, starting with the optimal product range and the corresponding product documentation, right through to sophisticated technical support.

Thanks to our many years of experience in the project business, we can offer our customers everything from a single source – a comprehensive product range and a team of project managers with a wealth of international experience. Not only do we guarantee compliance with delivery periods, we also know exactly how to coordinate complex procedures between general contractors, plant engineers and end users.

GEMÜ also takes care of all the necessary product documentation. A team of specialists are available for commissioning and calibration as required.

Training and after-sales service

We offer our customers a specific training programme to help them familiarize themselves with the performance capabilities of our products and operate them in a process-reliable way.

Whether in training rooms at our headquarters in Ingelfingen-Criesbach or directly at our customers' location – our experienced trainers can meet customers anywhere and provide a training programme that is tailored to their requirements.

This also comprises a special module for service and maintenance personnel and further education for authorized service trainers.

An experienced team of service technicians and specialists takes care of the our customers' concerns – even maintenance and servicing tasks. We also guarantee a long-term wear and spare parts supply, amongst others, for our products.

GEMÜ roadshow

With 12 m² of exhibition space, the roadshow provides a concentration of expertise within a small space. Equipped with air conditioning, heating, a coffee machine and refrigerator, the roadshow ensures that its visitors enjoy a high level of comfort. It is the perfect opportunity for intensive technical discussion and training with the experts from GEMÜ. Customers and sales prospects can refresh their knowledge, see GEMÜ products and solutions at work for themselves and consult with us to develop application-specific solutions in a relaxed atmosphere.



GEMÜ roadshow – on the road throughout Europe



Future issues Tomorrow's requirements

Processing industry 4.0

Recognizing the needs of tomorrow's customer today – that is our strength and our claim. We achieve this by proceeding with continuous proximity to our customers, combined with the strength and courage to question things and the desire to improve them.

The processing industry will continue to develop in the 21st century. It will embrace the opportunities for digitalization and networking to an extent that many today cannot yet imagine. The system concept will grow as the fusion of electronic, mechanic and software development disciplines forges ahead.

Each individual component in a complex process contributes to providing the information required by the user.

Advantages for our customers

GEMÜ is actively promoting the Industry 4.0 initiative. Our customers already have the option to call up and interpret valuable information from our process control system components, since only by understanding the procedures in individual components can you gain a comprehensive overview of the entire system, which is needed to optimize system availability.

We would also like to support our customers when it comes to maintenance and servicing. We are working on intelligent components and systems that facilitate the servicing process for the customer and considerably improve servicing documentation – another improvement in the process reliability of our customers' plants. GEMÜ system components always keep them one step ahead.



Reading valve data using an RFID reader and a mobile end device

GEMÜ GREEN ENGINEERING

A tradition of environmental awareness

green
engineering
by GEMÜ



GEMÜ R690 – the compact plastic diaphragm valve with "Best of Class" performance, in direct comparison with its predecessor, GEMÜ 690



GEMÜ plastic multi-port valve block – customized solution for a cost-efficient plant design

Right from the start, GEMÜ's planning and construction was more compact and used fewer resources than other manufacturers, and the company was concerned about the environment long before it attracted so much media attention. Back in the early 1970s, GEMÜ introduced a recycling system for the efficient re-use of waste materials that result from the manufacturing process or for recirculating them for the same use. This system has since ensured that valuable raw materials and limited resources are used to the best possible extent at GEMÜ.

The founder, Fritz Müller, described this commitment as follows: "We will use as little material and energy as possible in the development, manufacture, processing and transport of our products in order to protect the environment and use the resources of the earth as sparingly as possible."

This commitment is also being pursued by the next generation. "We should do whatever we are able to do" – Managing Director Gert Müller used these words to promote the GREEN ENGINEERING initiative that he founded in 2011. This combined all of the GEMÜ Group's sustainable activities under one initiative.

The GREEN ENGINEERING initiative is based on three pillars:

1. **CLEAN PRODUCTION:**
Savings in energy, water, and cooling and lubricating fluids
2. **CLEAN PRODUCTS:**
 - Savings in materials and resources used to manufacture products
 - Opportunities to make savings in plant design (e.g. reduced demand for energy and compressed air)
3. **CLEAN PROJECTS:**
 - Reduction in CO₂ produced by connecting sites (e.g. electric shuttles between German sites)
 - Recirculation of waste materials into the GEMÜ recycling system

GEMÜ is certified to the international environmental standard DIN EN ISO 14001.





The new high-performance generation

Even the first GEMÜ product, a process valve made of plastic, combined economical, material and cost-saving aspects. This tradition has been continued in the latest developments.

From cost-saving space requirements through to reduced energy demands during plant operation, our customers are also able to save material and energy.

Sustainability criteria for product development

GEMÜ engineers and technicians factor sustainability criteria into the development, design and production process as far as possible. This means that a number of different, versatile advantages are implemented.

Thus GEMÜ 550 and GEMÜ 650 were developed as two extremely thin-walled, stainless steel valves. As well as conserving important raw materials, this also allows the valves to be installed at closer intervals. This achieves a further saving in costly space requirements.

The redesign of the GEMÜ 690 diaphragm valve is another example. Several optimizations enabled a reduction in size, material savings of up to 50% and a significantly reduced control air consumption to be implemented.

Energy-saving buildings

The GEMÜ Group's building projects have also been put into focus. New buildings are being set up with respect to sustainability criteria, using primarily ecological design solutions and building technologies.

The process energy from compressors and test rigs is captured and used in part for the building's air conditioning.

The photovoltaic panels on the roof of the GEMÜ Dome's Development and Innovation Centre move according to the sun's position and likewise contribute to the generation of environmentally friendly energy.

Existing buildings are being renovated according to the latest energy-saving requirements.

GEMÜ GREEN MOVE

In 2011, Gert Müller designed the GREEN MOVE project. This electric shuttle system connects the headquarters in Ingelfingen-Criesbach to the GEMÜ Dome and the European Production and Logistics Centre.



The low-emission GEMÜ electric shuttles for commuting between the German company sites of Ingelfingen-Criesbach, Niedernhall-Waldzimmern and Kupferzell

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