AVENTURA
EVOLVING WATER COMPONENTS

ADDING VALUE TO YOUR SYSTEMS

WATER TREATMENT COMPONENTS

WATER HANDLING COMPONENTS

WASTEWATER TREATMENT COMPONENTS

Valves, measurement and control systems for industrial applications

Contents

General information

GEMÜ Group

The GEMÜ Group is a leading manufacturer of valves, measurement and control systems, and employs over 2500 members of staff worldwide.

With six production companies and 27 subsidiaries, as well as a tight network of commercial partners, GEMÜ is active in over 50 countries on all continents.

Countries
Subsidiaries and long-term partners

Employees
2500+

Even closer to the customer
Products for different customer requirements

Thanks to continuous innovative capacity and a focus on quality and proximity to our customers, GEMÜ is one of today's leading worldwide manufacturers of valves, measurement and control systems. With our broad product range and the strategic business units anchored behind this, we offer solutions for different customer groups and areas of application.

[1] Pharma, Food & Biotech

- Pharmaceutical industry
- Foodstuffs and beverages
- Biotechnology industry
- Cosmetics

[2] Industry

- Industrial water treatment
- Chemical engineering and surface finishing
- Power generation and environmental systems
- Mechanical engineering and processing industries

[3] Semiconductors

- Microelectronics
- Semiconductor production
- Battery production


1


2


3

Global manufacture

We develop and manufacture virtually all products at six different locations. At sites in Germany, Switzerland, the USA, China, Brazil and France, we draw on our many years of experience in the manufacture of valves, measurement and control systems to offer you products and solutions worldwide which conform to GEMÜ standards of quality.

To ensure that we can also continue to impress you with high quality and expert advice in the future, we are continually investing in modernizing our production centres.

Machining and coating technology

Whenever valves with high-grade corrosion protection are required, the right coating method can have a decisive influence on product quality. For this reason, at GEMÜ, we place considerable importance on our high level of vertical integration.

In our state-of-the-art machining centre at GEMÜ Valves China, casting unmachined parts are mechanically processed in-house. The most notable feature here is that our butterfly valve bodies and discs are milled in one clamping position. This allows us to achieve precise shape and positional tolerances for our butterfly valves.

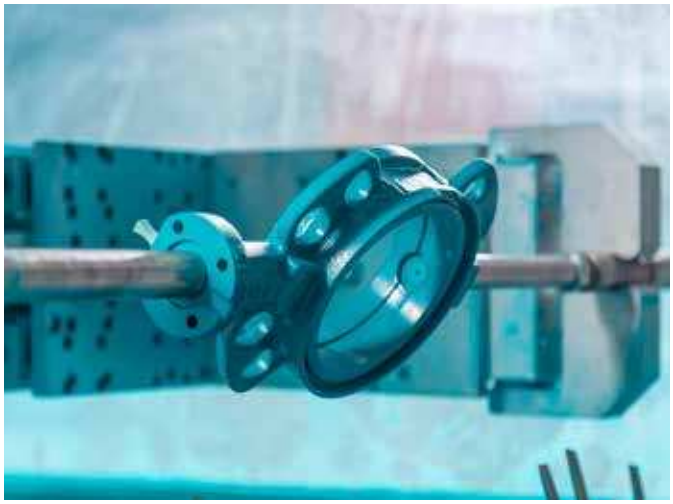
A further highlight is the fully automated coating system. The coating is applied by whirl sintering in the shortest possible time and without interruption, using state-of-the-art robot technology to produce a high-quality coating of the flap components with a uniform layer thickness of at least 250 µm. With it, we can offer our customers reliably robust equipment for their systems that is classified to DIN EN ISO 12944 in the top corrosion protection class, C5-M.

Diaphragm production

GEMÜ leaves nothing to chance in the development and manufacture of diaphragms. As well as many years of experience in the area of diaphragm valves, GEMÜ can draw on the Group's ever increasing expertise in the field of diaphragm production. In addition to the development of compounds, this also includes production and permanent control of the diaphragms during the manufacturing process. Random sampling of the finished products completes the comprehensive test cycle.

GEMÜ ensures its usual diaphragm quality thanks to the following measures:

- Raw materials are sourced exclusively from selected suppliers
- Comprehensive testing of the raw materials in our in-house laboratory or in external, accredited institutions
- Storage of raw materials under controlled conditions
- Automated testing and documentation processes during production
- State-of-the-art production facilities
- The diaphragms are tested on our own test rigs

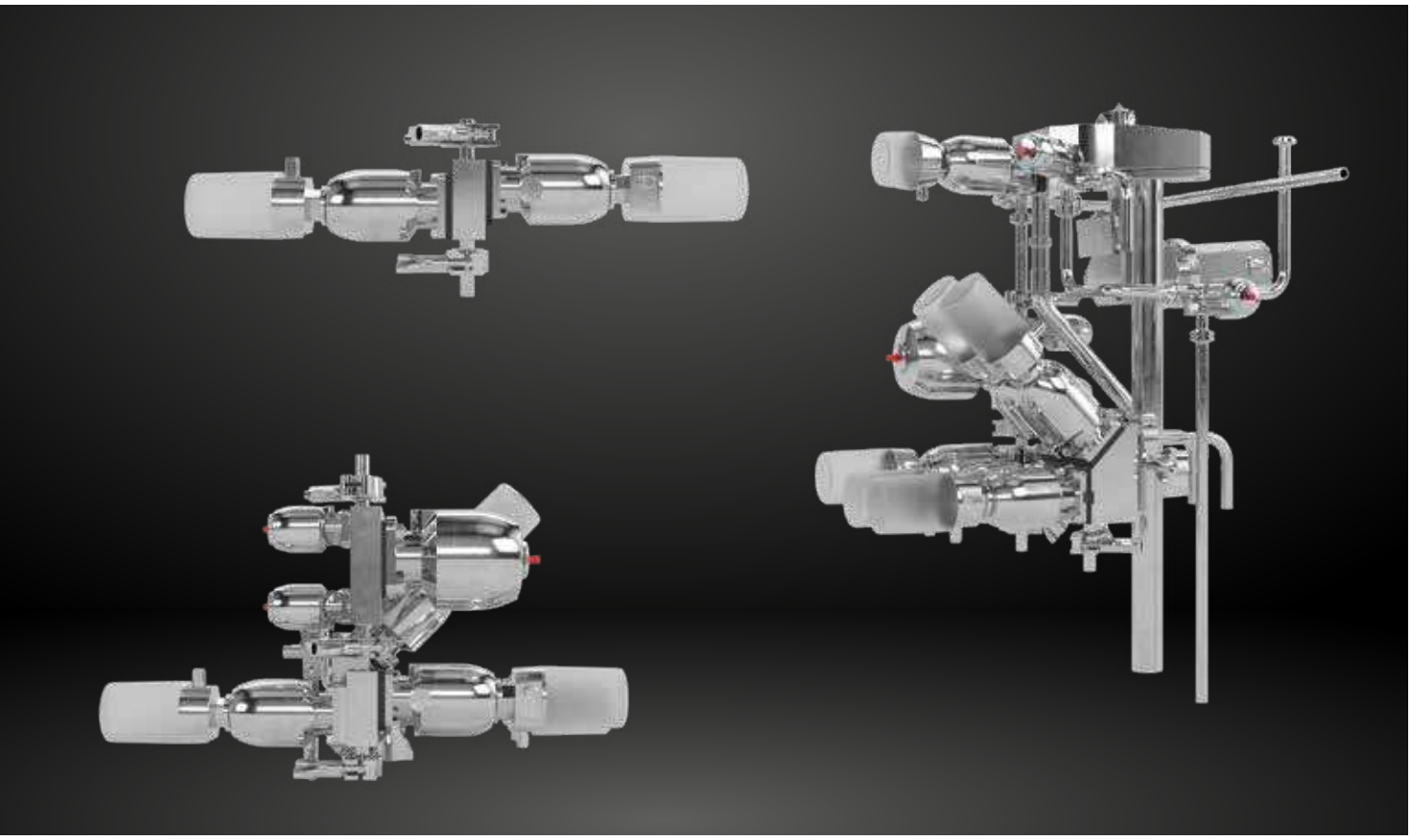


GEMÜ Systems

As a specialist in valve design, we also offer you individual system solutions. From the idea stage to development and right through to manufacture – the entire process is taken care of under one roof. This means you can benefit from system solutions tailored to your specific requirements.

All from a single source

- Subassemblies, small systems and partial sections
- Individual connection solutions
- Sample and low-volume production
- Process optimization and special solutions
- Test rigs and prototype construction



Our range of services

GEMÜ Systems supports you with your individual requirements, from inquiries about customized individual components and ready-to-fit assemblies through to the joint development of complete systems.

GEMÜ Systems differentiates between different levels. We are by your side, from simple welding configurations through to robotics.

Level 1:
Simple component assembly

Level 2:
Component assembly with control unit

Level 3:
Control systems and system development

Leading through experience

Thanks to our many years of experience in measuring, valve and control systems technology, we have specialist skills and technical expertise in various areas of application. We value collaborative partnership when working on your project plans.

Your advantages

- Simplified procurement process
- Reduced number of interfaces
- Time and cost savings
- Outsourcing of order peaks

State-of-the-art manufacturing

Using the latest technologies and manufacturing processes, we can update our knowledge as a component manufacturer and carry this through to our system creation. With the latest construction tools, we are ideally prepared and can help you take the next step towards your future.

GEMÜ Customer Service and Training

Regular maintenance is essential to increase the service life and effectiveness of your components. Our service technicians carry out the maintenance work on site at your premises or in modern repair facilities. For fast identification of shortcomings in your processes, we offer regular plant screening. We have many years of experience in commissioning plants and their components. With our expert knowledge, we support you with correct installation and integration into the existing system landscape.

GEMÜ Customer Service

Maintenance

- Increased reliability of your plant
- Extended system operating time
- Increase in production volume
- Maintenance documentation in accordance with your requirements

Maintenance support

Do you have a staff shortage? We offer highly motivated employees with the appropriate training, experience and routine in GMP-compliant maintenance documentation.

Repair work

- Short and flexible reaction time
- Large stock of spare and wearing parts
- Remote diagnostics with innovative software solution
- Equipment tests on modern test rigs

Plant screening and findings

- Recognition of shortcomings in processes
- Transparent explanation and documentation
- Condition analyses on used devices
- Optimisation proposals through device analyses

Commissioning

- Ideal adjustment of single components
- Programme optimizations on electrical devices
- Ensuring high assembly quality
- Documentation of settings and operations

Contact our Customer Service

E-mail service@gemue.de
Telephone +49 (0) 7940 123 450

GEMÜ Training

GEMÜ offers you a comprehensive training and further education programme. The technical training courses are aimed at new entrants and people changing career as well as experienced specialists. Select your optimal further training from our wide-ranging portfolio of training courses – from basic training to valve designs and service training.

Your advantages

- Creating understanding for the huge variety of valve designs
- Recognising faults and initiating optimizations
- Practical learning on functional models
- Live online training courses and classroom training at GEMÜ or on site at your premises
- Notes and information on replacing wearing parts and commissioning

Contact our training team

E-mail training@gemue.de
Telephone +49 (0) 7940 123 450

Current training dates can be found on our website.

CONEXO
Digital information management and maintenance support

In addition to clear identification of components, CONEXO also offers support with the qualification of plants and paperless maintenance. These are identified via an RFID chip using the CONEXO pen or via a QR code with CONEXO Webview and the GEMÜ app directly on the component within the plant.

Overview of the CONEXO system

Identification

- Electronic identification of components using CONEXO tags (QR code or RFID chip)
- Scanning the CONEXO tag
- Displaying the product information and documentation

Documentation

- Construction of the plant structure on the CONEXO portal
- Integration of the component data
- Creation of step-by-step instructions for each maintenance type
- Definition of the maintenance tasks with location, cycle, implementation period and operator

Maintenance support

- Implementation of maintenance work via step-by-step instructions
- Automatic documentation of the implementation
- Electronic signature through user login
- Distribution of the maintenance report via PDF
- Calling up the maintenance report

Digital product label

Since mid-2021, in addition to the normal product label, GEMÜ products have gradually also included an additional label with a QR code and serial number. You can use this to positively identify our products all over the world and, in addition to the classic product label, call up lots of additional product-related information in digital format.

The following data is available to you in digital format, directly in the plant:

- Product description
- Article information
- Product documentation
- Certificates

With the QR code label, GEMÜ fulfils the requirements of DIN SPEC 91406 for the automatic identification of physical objects and information about the physical object in IT systems, in particular IoT systems.

GEMÜ app
Numerous functions in one mobile application

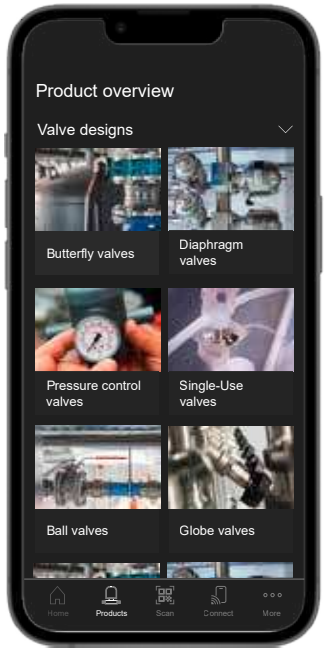
Take a step with us into a mobile era!

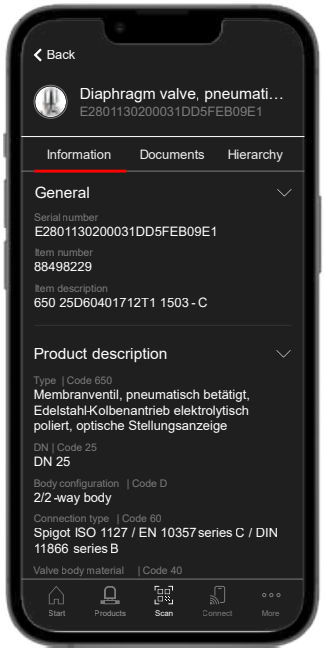
Discover the new GEMÜ app – with numerous functions that simplify your life. The complete GEMÜ product range will also be available right away – from the convenience of your pocket. With our app for smartphones and tablets, you can call up product information anywhere and benefit from our digital services.

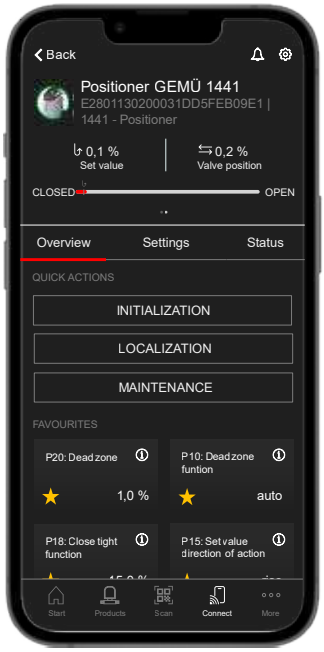
Advantages

- Product documentation on all GEMÜ products can be downloaded while you're on the go
- Call up item-specific information without spending a long time searching
- Clear identification of GEMÜ products with QR code or RFID tag
- Convenient operation and configuration for GEMÜ products with Bluetooth interface
- Quick and easy way to get in touch

Overview of main functions







Calling up product information

- General product data
- Datasheets
- Operating instructions
- Product flyer
- etc.

Clearly identifying products

- Scanning QR codes or RFID tags
- Direct access to specific item information
- Display of appropriate product documentation and customized certificates
- Overview of installed product components

Configuring and operating products

- Initialization, configuration and parameterization
- Detailed depiction of process values and status information
- Error analysis
- Setting the operating mode

Download the GEMÜ app now!

The GEMÜ app is available in German, English and French, and can be used both on Android and on iOS operating systems.

Download on the App Store

GET IT ON Google Play

Overview of industrial sectors

GEMÜ products are used around the globe in industrial water treatment and waste water treatment, the chemical industry, power generation and environmental systems, the industrial plant and machinery sectors, surface finishing and many other areas.

Our decades of application experience feed directly into the new and further development of our valves. This is why, in the demanding industrial environment, GEMÜ valves have proven very successful to date.

Industrial water treatment

In industry, barely a single production process can manage without water. Whether it is for cooling, cleaning or as a starting material for aqueous solutions – depending on the application, unwanted substances must be removed from the raw water or desired substances added.

This task is performed by water treatment plants, thus ensuring a functioning circuit. The GEMÜ product range can provide numerous solutions for these plants.

Power generation and environmental systems

The signs all point towards sustainable modernization of power and heat. Whether renewable or conventional – innovative, efficient and durable valves are essential in power generation. This is why, at GEMÜ, we always offer solution-focused concepts.

Chemical processes

Specific valve and component solutions are required when dealing with critical working media, high temperatures and high pressures.

GEMÜ offers numerous valves made of plastic and high-performance thermoplastics, e.g. PFA or PVDF. This flexibility regarding valve selection ensures the highest possible degree of process and plant reliability even for critical media.

Surface finishing

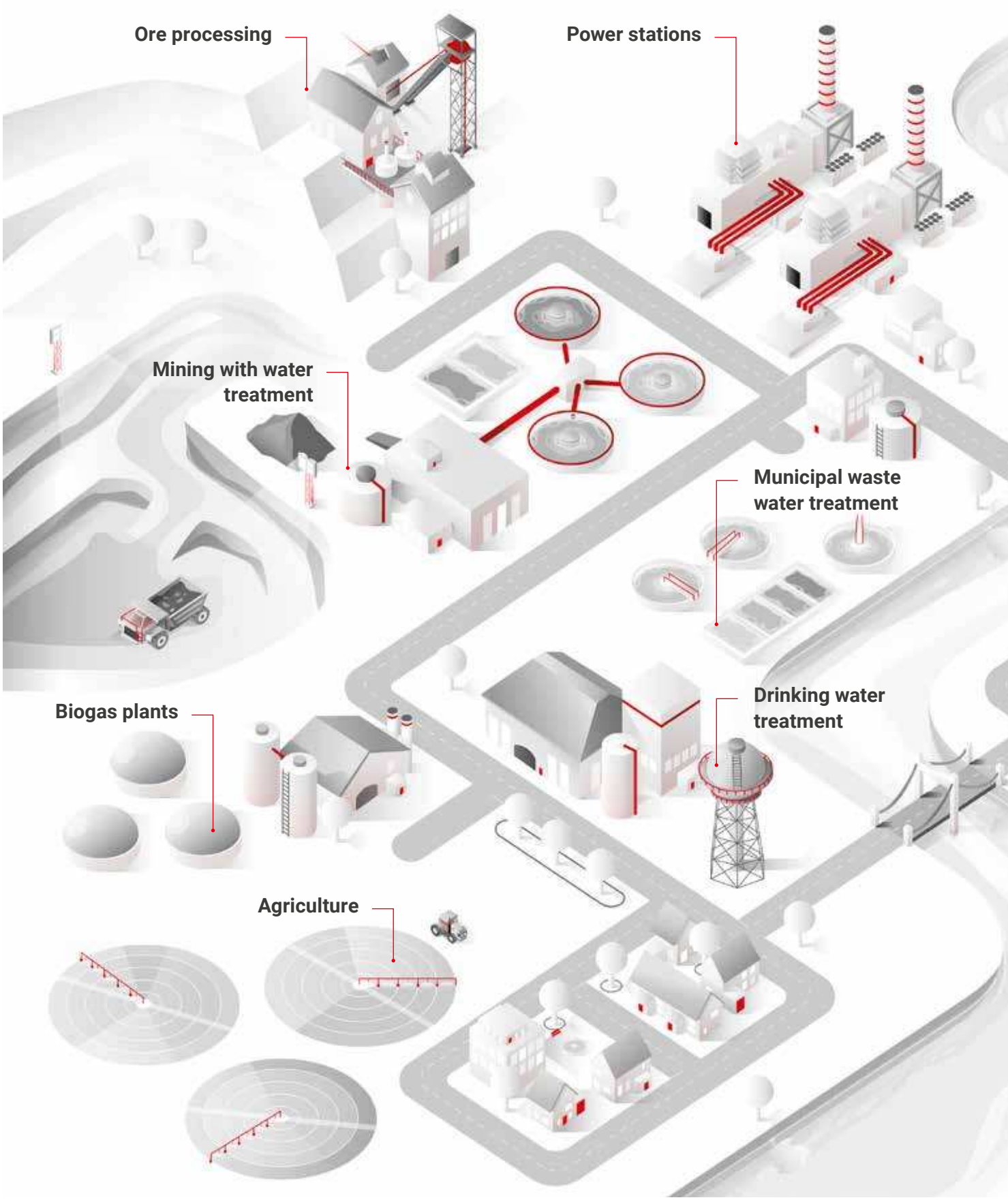
Numerous products today come with high-quality functional or decorative surfaces. When it comes to valve selection, the high flexibility in terms of material selection is one of GEMÜ's selling points. You can also choose to receive our valves and individual components, such as diaphragms, free from substances that prevent paint adhesion.

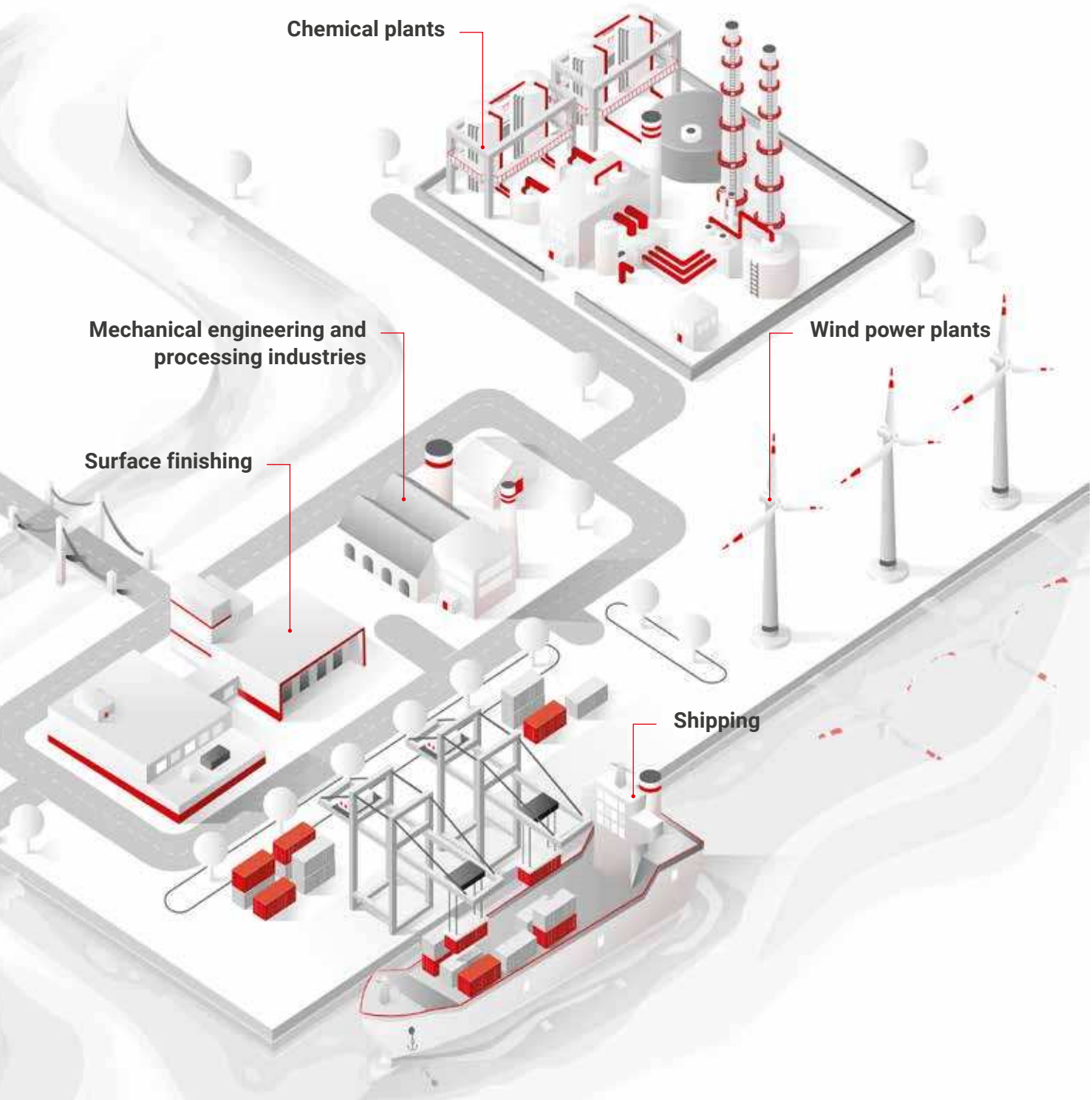
Mechanical engineering

Technological progress is leading to changing procedures and processes both in the mechanical engineering industry and in the processing industry. The GEMÜ product range includes robust valves and customized solutions for valves, measurement and control systems.

Also – and in particular – when new requirements arise in plant and mechanical engineering, we are the right partner when it comes to the distribution, mixing, supply and isolation of media.

Areas of application for valves, measurement and control systems




Chemical plants
Mechanical engineering and processing industries
Surface finishing
Wind power plants
Shipping

Valve designs

Valve types

Whether it is for water, gas or air – valves are used for shutting off or regulating a medium in piping. But which functional principle is the right one? The designations of various valve types are frequently more numerous than the types themselves. That is why we are giving you an overview here of the most common designs in the industrial plant and machinery sectors.

Valves with linear movement

Diaphragm valves
Diaphragm valves are the all-rounders in the world of valves. One of their major advantages is that only two components come into contact with the working medium – the diaphragm and the valve body.

The flexible shut-off diaphragm is deformed by the compressor and, during the closing movement, is pressed onto the sealing weir of the valve body with a positive and non-positive fit.

Globe valves
Globe valves are suitable for clean, liquid media, as well as gases and steam. Due to their linear movement and favourable mechanical conditions, they often perform automated tasks with fast cycle duties and high switching frequencies.

Globe valves involve a gasket, the valve plug, pressing against a seal seat, which then blocks the volumetric flow.

Diaphragm globe valves
Valves that combine the advantages of the hermetic sealing of an actuator and the medium of a diaphragm valve with the advantages of a globe valve are designated as diaphragm globe valves.

The flexible PD (plug diaphragm) is compressed onto the valve seat for sealing. The actuator is hermetically separated from the medium by a diaphragm globe valve.

Quarter turn valves

Butterfly valves
If pipes are large, then butterfly valves are required. Most frequently, they are used for controlling mechanically pure liquids. In the right material combination, however, slightly abrasive liquids or gases pose no problem either.

Butterfly valves comprise a ring-shaped housing into which a liner and a butterfly disc are inserted. The disc swings 90° into the gasket.

Ball valves
Ball valves are versatile and can also be used in extreme circumstances. This type of valve is particularly well-suited to safely shutting off liquid and gaseous media at a very high operating pressure.

The ball valve comprises a ball with a hollow bore, which sits in a body between sealing rings. The valve can be opened and closed by rotating it through 90°.

Selection guide

The following table aims to give you an overview of which valve function is most appropriate for which processes and media. In addition to these categories, we also offer valves for special applications.

Valve groups according to valve function

Criterion	Diaphragm valves		Globe valves	Butterfly valves	
	Metal	Plastic	Metal	Metal	Plastic
MEDIUM					
Gaseous	○	○	●	●	–
Steam	○	–	●	●	–
Liquid	●	●	●	●	●
Viscous	●	●	○	●	●
Particulate, abrasive	●	○	–	●	○
Granular	○	○	–	○	○
Corrosive (depends on material)	●	●	–	●	●
PROCESS					
Multi-port design available	●	●	●	–	–
Piggable	–	–	–	–	–
Controllable	○	○	●	For larger diameters	
Media temperature	Up to 100 °C	Up to 150 °C	Up to 185 °C	Up to 230 °C	Up to 90 °C
Operating pressure	Up to 10 bar	Up to 10 bar	Up to 40 bar	Up to 40 bar	Up to 10 bar
Frequent cycle duties	○	○	●	–	–

● Exremely suitable
○ Conditionally suitable
– Not suitable

Further process accessories

Check valves

Strainers

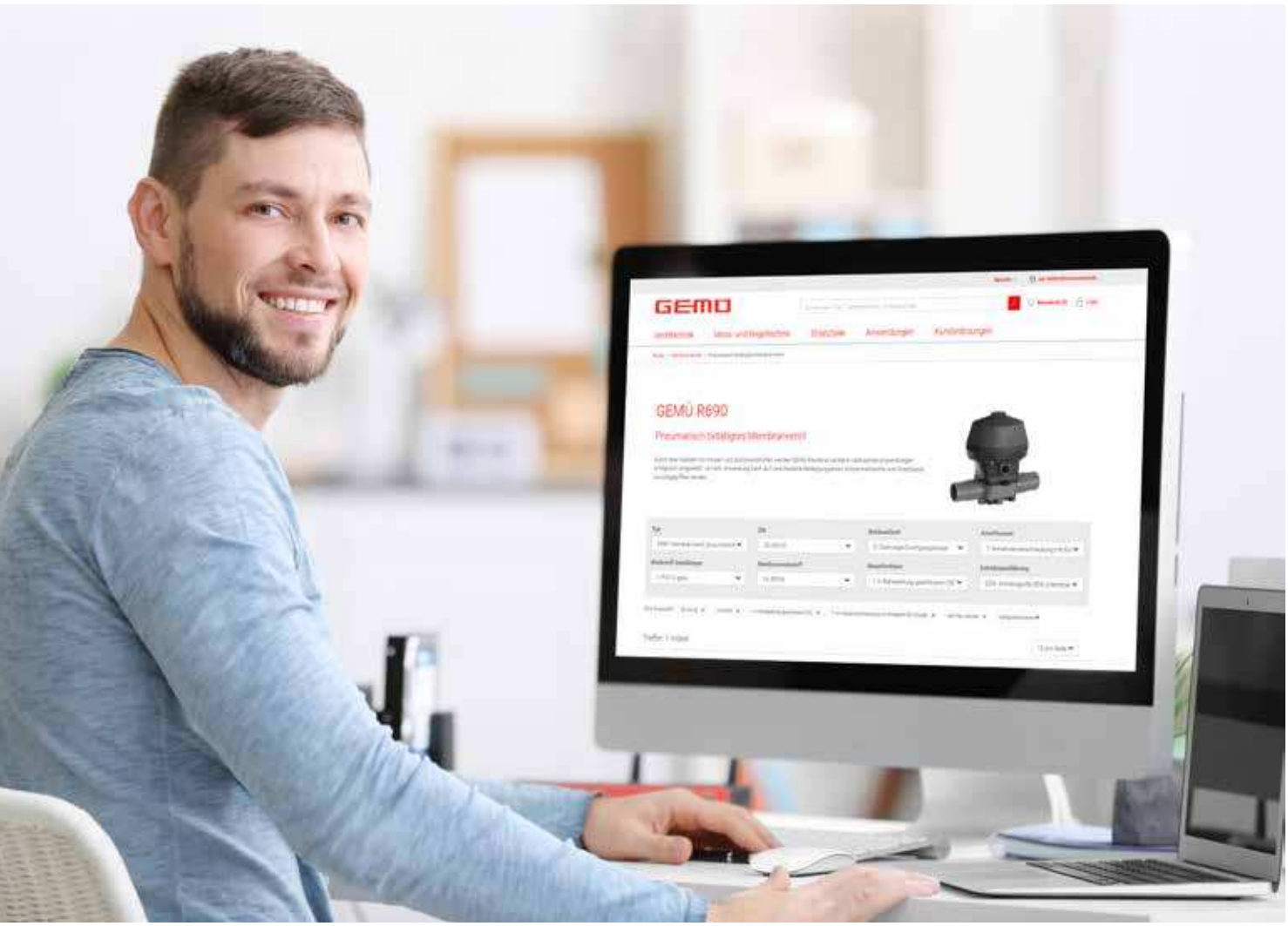
Ball valves		Diaphragm globe valves	Process solenoid valves	
Metal	Plastic	Plastic	Metal	Plastic
●	●	○	–	–
●	●	○	–	–
●	●	●	●	●
○	○	●	○	○
–	–	–	–	–
–	–	–	–	–
–	●	●	–	○
●	●	●	●	–
●	●	–	–	–
○	–	●	–	–
Up to 220 °C	Up to 100 °C	Up to 150 °C	Up to 60 °C	Up to 60 °C
Up to 137 bar	Up to 16 bar	Up to 6 bar	Up to 20 bar	Up to 6 bar
–	–	●	●	●

Control systems

Pressure control valves

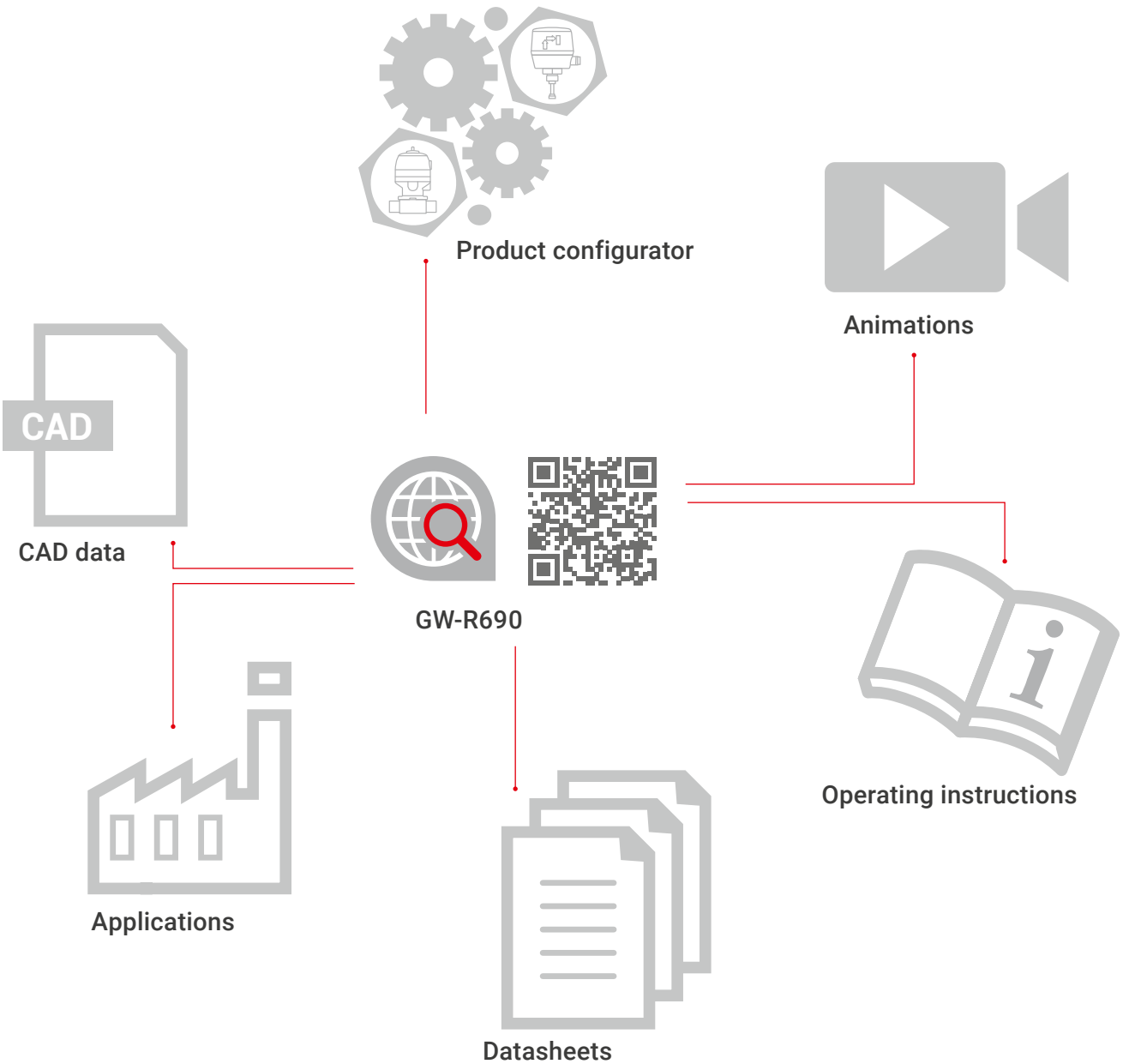
Configure easily online

With this product range, we want to offer you a quick overview of all standard products in our range. We have, therefore, listed the most important technical specifications for individual products in this catalogue. But there's still more to discover! On our website, you can find a great deal of further useful information, such as datasheets, operating instructions and animations, allowing you to configure a valve completely in line with your requirements.



Go directly to the online product page using the web code

The web code consists of the abbreviation "GW-" and the respective product type. For example, the GEMÜ R690 diaphragm valve has the web code GW-R690. Enter the web code in the search frame on the GEMÜ website ***www.gemu-group.com*** and you will be taken straight to the associated product page. Alternatively, you can scan the QR code.



Diaphragm valves

Description

Diaphragm valves are the all-rounders in the world of valves. One of their major advantages is that only two components come into contact with the working medium – the diaphragm and the valve body. Diaphragm valves are amongst the valve types with minimal dead space and are, therefore, insensitive to particulate media and can be cleaned safely. They are the first choice for applications in which deposits of the medium are to be avoided at all costs.

The large material selection means that GEMÜ diaphragm valves are ideally suited for corrosive, abrasive or high-viscosity media, which are often found in chemical processes and in the industrial water treatment and processing industries.

Features

- For ultra-pure to heavily contaminated abrasive media
- Optional flow direction
- Hermetic separation between medium and actuator
- Very good cleanability

Typical working media

- Inert and corrosive media
- Clean and contaminated abrasive media
- Liquids and gases
- Slurries, powder and dust

Applications

- Treatment of waste water, sewage, sea water, drinking water, process water
- Woodpulp and paper manufacture/processing
- Paint and coating manufacturing/processing
- Gemstone, metal and mineral extraction and mining/processing
- Fertilizer production
- Brine and salt extraction
- Power plants
- Sewage clarification plants
- Dyeing
- Granulate manufacture
- Sugar production
- Ceramics industry

Functional principle of diaphragm valves

Open

Closed

The diaphragm valve works thanks to the interaction of perfectly tuned components. These are the valve body, the shut-off diaphragm, the diaphragm fixing, the compressor as well as the actuator.

The flexible shut-off diaphragm is deformed by the compressor and, during the closing movement, is pressed onto the sealing weir of the valve body with a positive and non-positive fit. You can choose the flow direction here.

GEMÜ seal system

GEMÜ valve bodies are distinguished by a sealing bead running close to the seat diameter. The defined sealing edge between the valve body and the diaphragm makes it ideal for sterile applications. This measure reduces the ring-shaped gap between diaphragm and valve body in the external sealing area. This special feature makes GEMÜ diaphragm valves suitable for sterile applications. When developing our diaphragms, we also consider this crucial functional and design characteristic, which was developed by GEMÜ more than three decades ago and has been continually refined since then. This is the only way to ensure that our customers can rely on the valve as a complete unit.

GEMÜ diaphragms have been developed, tested, and approved for applications with GEMÜ valve bodies. Therefore GEMÜ does not recommend the use of other manufacturers' diaphragms with GEMÜ valve bodies. We shall not accept any liability resulting from the use of diaphragms of other manufacturers inside GEMÜ diaphragm valves.

GEMÜ seal system

Modular system for diaphragm valves

With the GEMÜ modular system, we offer you the opportunity to put together a suitable valve in line with your requirements. Discover all configuration options at **www.gemu-group.com**

Measurement and control technology
Electrical position indicators and combi switchboxes | Positioners and process controllers | Accessories



Actuators
Manual | Pneumatic | Motorized
Metal | Plastic



Diaphragms
EPDM | FKM | NBR | NR | IIR | PTFE/EPDM



Body
2/2-way body | Multi-port body
Metal | Metal with plastic lining | Plastic



Configure your valve online
at **www.gemu-group.com**

Weir-type and full bore bodies

Depending on area of application, designs with or without a sealing weir can be advisable.
The differences will be compared in the following section.

Weir-type bodies

Features
- Depending on the version, up to 10 bar operating pressure and 150 °C operating temperature
- Good flow characteristics
- All mechanical components are located outside of the media-wetted area. The working medium comes into contact only with the internal surface finish of the valve body and the diaphragm surface
- The valve is also suitable for higher cycle duties

Areas of use
- Suitable for clean and heavily contaminated, liquid and gaseous as well as inert and corrosive media
- Slurries, powder and dust
- Can be used for abrasive media
- Controlling liquid media

Typical areas of application
- Waste water, sewage, sea water, cooling water, service water and drinking water treatment
- Woodpulp and paper manufacture/processing
- Dyestuff and paint manufacturing/processing
- Gemstone, metal and mineral extraction and mining/processing
- Fertilizer production
- Extraction/processing of plaster, cement, sulphur and lime
- Brine and salt extraction
- Power plants
- Sewage clarification plants
- Dyeing
- Granulate manufacture
- Sugar production

Open

Closed

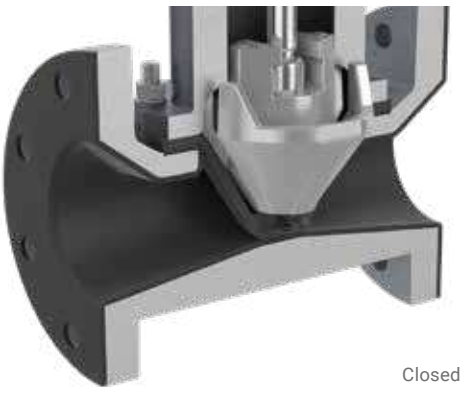
Full bore bodies

Features
- Depending on the version, up to 7 bar operating pressure and 100 °C operating temperature
- Very good flow characteristics
- All mechanical components are located outside of the media-wetted area. The working medium comes into contact only with the internal surface finish of the valve body and the diaphragm surface

Areas of use
- Suitable for heavily and extremely contaminated liquid, inert and corrosive media
- Heavily contaminated waste water and slurries
- Granular materials
- Suitable for abrasive media

Typical areas of application
- Woodpulp and paper manufacture/processing
- Gemstone, metal and mineral extraction and mining/ processing
- Fertilizer production/phosphate processing
- Extraction/processing of plaster, cement, sulphur and lime
- Sewage clarification plants
- Granulate manufacture

Open



Closed

Lined diaphragm valves

Lined valve bodies can be used if a valve is exposed to particularly heavy chemical or mechanical loads. The combination of robust body housing and durable plastics is preferable for corrosive media and safety systems, such as in the chemical industry.

At GEMÜ, we manufacture the injection moulding tools for the plastic linings ourselves.

Our special manufacturing processes and the sophisticated geometric suitability of the material transitions make lined GEMÜ valve bodies a long-term high-grade application solution. For additional reliability of application, we carry out an individual inspection of each lining.

The lined GEMÜ valve bodies are produced exclusively using high-quality materials and only at selected and certified foundries.

This is how high-quality, lined diaphragm valves are developed at GEMÜ

- Injection moulding is carried out via a central sprue from below through the valve weir, preventing the plastic layer from detaching from the metal body under vacuum operating conditions
- The metal/plastic material transition is designed at the pipe connections so that the plastic lining is fixed axially inside the pipe and no stress damage can occur as a result of thermal expansion
- A temperature-resistant coating on the metal bodies prepared for injection provides a high level of corrosion protection for the metal surface even underneath the plastic layer

Lining/injection moulding

GEMÜ injects the plastic valve body linings subject to strict quality controls, e.g. spark testing.

When selecting the materials for the lining, you can choose between polypropylene (PP) and fluoroplastics (PFA), as well as soft and hard rubber.

Using an extruder, fluid thermoplastics and elastomers are injected between the metal bodies and into the metal mould core inside the bodies. The wall construction strength can, therefore, be defined precisely – and at a consistently high quality.

Coating

In demanding ambient conditions, valves also need special external protection. This is why GEMÜ offers different coating solutions:

- Metal, paint or synthetic powder coating
- Coating applied by galvanisation, painting or immersion/enamelling
- Thin coating, less material coating
- Materials such as zinc, chrome, epoxy, phenol resins, nylon or fluoroplastics are used as coating materials

Single-use valves

GEMÜ also offers diaphragm valves for single use. These are designated as single-use valves and are used if it is crucial to avoid cross-contamination or if a simplified plant design is required. Secondary processes once required for cleaning and sterilization (CIP/SIP) are no longer at all necessary in single-use systems and processes. The necessary purity is guaranteed by using gamma rays to sterilize all the process components used.

Unlike with a conventional diaphragm valve, the two media-wetted components (valve body and diaphragm) are sealed together. This produces the central component, the single-use valve body, which is removed from the manual operator and disposed of after a single use. The actuator remains in the system for multiple use. The single-use diaphragm valve body and the actuator are joined using a clamp. These are locked together and unlocked through a defined opening and closing procedure.

Manually operated diaphragm valves made of metal

Overview

GEMÜ type	601 / 602 / 612 / 673	673P9	611/671	675
				
Special feature		Valve actuator with sealing		
Nominal sizes	DN 4 to 65	DN 4 to 65	DN 10 to 100	DN 15 to 150
Media temperature	-10 to 100 °C	-10 to 100 °C	-10 to 80 °C	-10 to 100 °C
Ambient temperature	0 to 60 °C	0 to 60 °C	0 to 60 °C	0 to 60 °C
Operating pressure	0 to 10 bar	0 to 10 bar	0 to 10 bar	0 to 10 bar
Connection types				
Clamp	●	●	●	-
Flange	●	●	●	●
Spigot	●	●	●	-
Threaded connection	●	●	●	●
Body materials				
1.4408	●	●	●	-
1.4408, lined	●	-	●	-
1.4435	●	●	●	-
1.4435 (316L)	●	●	●	-
1.4435 (BN2)	●	●	●	-
1.4539	●	●	●	-
CW617N	-	-	●	-
EN-GJL-250	-	-	-	●
EN-GJL-250, lined	-	-	-	-
EN-GJS-400-18-LT	-	-	●	●
EN-GJS-400-18-LT, lined	●	●	●	●
EN-GJS-500-7, lined	-	-	-	●
Conformities				
3A	●	-	-	-
Belgaqua	-	-	●	-
CRN	●	●	-	●
EAC	●	●	●	●
FDA	●	●	●	●
Oxygen	●	●	●	-
Reg. (EU) No. 10/2011	●	●	●	●
Regulation (EC) No. 1935/2004	●	●	●	●
Regulation (EC) No. 2023/2006	●	●	●	-
TA Luft (German Clean Air Act)	●	●	-	●
USP	●	●	●	-

Technical data depends on the respective configuration - see datasheet or Product Selection Tool

GEMÜ type	653 BioStar	654 BioStar	655
			
Special feature			Full bore valve body
Nominal sizes	DN 10 to 100	DN 4 to 100	DN 25 to 300
Media temperature	-10 to 100 °C	-10 to 100 °C	0 to 100 °C
Ambient temperature	0 to 60 °C	0 to 60 °C	0 to 60 °C
Operating pressure	0 to 10 bar	0 to 10 bar	0 to 7 bar
Connection types			
Clamp	●	●	-
Flange	●	●	●
Spigot	●	●	-
Threaded connection	●	●	-
Body materials			
1.4408	●	●	-
1.4408, lined	●	●	-
1.4435	●	●	-
1.4435 (316L)	●	●	-
1.4435 (BN2)	●	●	-
1.4539	●	●	-
CW617N	-	-	-
EN-GJL-250	-	-	●
EN-GJL-250, lined	-	-	●
EN-GJS-400-18-LT	-	-	-
EN-GJS-400-18-LT, lined	-	-	-
EN-GJS-500-7, lined	-	-	-
Conformities			
3A	●	●	-
Belgaqua	-	-	-
CRN	●	●	●
EAC	●	●	●
FDA	●	●	-
Oxygen	●	●	-
Reg. (EU) No. 10/2011	●	●	-
Regulation (EC) No. 1935/2004	●	●	-
Regulation (EC) No. 2023/2006	●	●	-
TA Luft (German Clean Air Act)	●	●	-
USP	●	●	-

Technical data depends on the respective configuration - see datasheet or Product Selection Tool

GEMÜ 601 / 602 / 612 / 673
Manually operated diaphragm valve

The manually operated GEMÜ 601, GEMÜ 612 and GEMÜ 673 2/2-way diaphragm valves have a temperature-resistant plastic handwheel. GEMÜ 602 has a stainless steel handwheel. The bonnet and internals are made entirely from stainless steel. A seal adjuster to increase the service life of the diaphragm and an optical position indicator are integrated as standard.

Features

- Long service life of the diaphragm due to patented seal adjuster (US-Pat. 5 377 956)
- Compact design (ideal when space is at a premium)
- Continuous minimum flow regulation thanks to closing stroke limiter
- Various lining materials are available for a wide range of media

Technical specifications

Media temperature :	-10 to 100 °C
Sterilization temperature:	max. 150 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 4 to 65
Body configurations:	2/2-way body | i-body | Multi-port body | Tank valve body | T-body | Welding configuration
Connection types:	Clamp | Flange | Spigot | Threaded connection
Connection standards:	ANSI | ASME | BS | DIN | EN | ISO | JIS | SMS
Body materials:	1.4408, investment casting material | 1.4408, investment casting material, PFA lined | 1.4435 (316L), forged material | 1.4435 (BN2), forged material | 1.4435, investment casting material | 1.4539 (904L), forged material | EN-GJS-400-18-LT, SG iron material
Body lining:	PFA | PP
Diaphragm materials:	EPDM | FKM | PTFE/EPDM | PTFE/PVDF/EPDM
Conformities:	3A | CRN | EAC | FDA | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act) | USP

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GW-601 GW-602 GW-612 GW-673

GEMÜ 673P9
Manually operated diaphragm valve

The GEMÜ 673P9 2/2-way diaphragm valve has a temperature-resistant plastic handwheel and is manually operated. The actuator of the valve is specially sealed, making it ideal for demanding cleaning processes. A closing stroke limiter to increase the service life of the diaphragm and an optical position indicator are integrated as standard (diaphragm size 10 to diaphragm size 50).

Features

- Compact design (ideal when space is at a premium)
- Autoclave capability
- CIP, COP and SIP capable
- Continuous minimum flow regulation thanks to closing stroke limiter
- Specially sealed actuator version

Technical specifications

Media temperature :	-10 to 100 °C
Sterilization temperature:	Max. 150 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 4 to 65
Body configurations:	2/2-way body | i-body | Multi-port body | Tank valve body | T-body | Welding configuration
Connection types:	Clamp | Flange | Spigot | Threaded connection
Connection standards:	ANSI | ASME | BS | DIN | EN | ISO | JIS | SMS
Body materials:	1.4408, investment casting material | 1.4435 (316L), forged material | 1.4435 (BN2), forged material | 1.4435, investment casting material | 1.4539 (904L), forged material | EN-GJS-400-18-LT, SG iron material
Body lining:	PFA | PP
Diaphragm materials:	EPDM | FKM | PTFE/EPDM
Conformities:	CRN | EAC | FDA | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act) | USP

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GW-673P9

GEMÜ 611/671
Manually operated diaphragm valve

The GEMÜ 611/671 2/2-way diaphragm valves have a low-maintenance plastic actuator and are manually operated. An integral optical position indicator is standard.

Features

- Optional PVDF handwheel available in white (GEMÜ 611)
- Extensive range of accessories available, e.g. electrical position indicator for "open" handwheel position or lockable handwheel clamp (GEMÜ 671)

Technical specifications

Media temperature :	-10 to 80 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 10 to 100
Body configurations:	2/2-way body | i-body | Welding configuration
Connection types:	Clamp | Flange | Spigot | Threaded connection
Connection standards:	ANSI | ASME | BS | DIN | EN | ISO | JIS | SMS
Body materials:	1.4408, investment casting material, PFA lined | 1.4435 (316L), forged material | 1.4435 (BN2), forged material | 1.4435, investment casting material | 1.4539 (904L), forged material | CW617N, brass | EN-GJS-400-18-LT, SG iron material, PFA lined | EN-GJS-400-18-LT, SG iron material, PP lined
Body lining:	PFA | PP
Diaphragm materials:	EPDM | FKM | PTFE/EPDM | PTFE/PVDF/EPDM
Conformities:	Belgaqua | EAC | FDA | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | USP

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GW-

GEMÜ 675
Manually operated diaphragm valve

The GEMÜ 675 2/2-way diaphragm valve has a metal handwheel and is manually operated. An integral optical position indicator is standard.

Features

- Suitable for particulate and abrasive media
- Various lining materials are available for a wide range of media
- Standard integral optical position indicator

Technical specifications

Media temperature :	-10 to 100 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 15 to 150
Body configurations:	2/2-way body
Connection types:	Flange | Threaded connection
Connection standards:	ANSI | BS | DIN | EN
Body materials:	EN-GJL-250, cast iron material | EN-GJS-400-18-LT, SG iron material | EN-GJS-400-18-LT, SG iron material with hard rubber lining | EN-GJS-400-18-LT, SG iron material, PFA lined | EN-GJS-400-18-LT, SG iron material, PP lined | EN-GJS-500-7, ductile iron material, PFA lined | EN-GJS-500-7, ductile iron material, PP lined
Body lining:	Hard rubber | PFA | PP
Diaphragm materials:	CR | EPDM | FKM | NBR | PTFE/EPDM | PTFE/FKM | PTFE/PVDF/EPDM
Conformities:	CRN | EAC | FDA | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | TA Luft (German Clean Air Act)

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GW-675

GEMÜ 653 BioStar
Manually operated diaphragm valve

The GEMÜ 653 2/2-way diaphragm valve has a stainless steel bonnet and is manually operated. The valve features a handwheel made of temperature and chemically resistant plastic. An integral optical position indicator is standard.

Features

- CIP/SIP capable
- Autoclave capability
- Extensive range of accessories available
- Opening stroke and closing stroke limiter
- Handwheel locking available upon request (electric or mechanical)
- Configurable with proximity switches for position feedback

Technical specifications

Media temperature :	-10 to 100 °C
Sterilization temperature:	Max. 150 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 10 to 100
Body configurations:	2/2-way body | i-body | Multi-port body | Tank valve body | T-body | Welding configuration
Connection types:	Clamp | Flange | Spigot | Threaded connection
Connection standards:	ANSI | ASME | BS | DIN | EN | ISO | JIS | SMS
Body materials:	1.4408, investment casting material | 1.4435 (316L), forged material | 1.4435 (BN2), forged material | 1.4435, investment casting material | 1.4539 (904L), forged material
Body lining:	PFA
Diaphragm materials:	EPDM | FKM | PTFE/EPDM | PTFE/PVDF/EPDM
Conformities:	3A | CRN | EAC | FDA | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act) | USP

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GW-653

GEMÜ 654 BioStar
Manually operated diaphragm valve

The GEMÜ 654 2/2-way diaphragm valve has a stainless steel bonnet and is manually operated. The valve has a handwheel made from stainless steel. An integral optical position indicator is standard.

Features

- Handwheel design allows minimal heat sink
- CIP/SIP capable
- Autoclave capability
- Extensive range of accessories available
- Opening stroke and closing stroke limiter
- Handwheel locking available upon request (electric or mechanical)
- Configurable with proximity switches for position feedback

Technical specifications

Media temperature :	-10 to 100 °C
Sterilization temperature:	Max. 150 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 4 to 100
Body configurations:	2/2-way body | i-body | Multi-port body | Tank valve body | T-body | Welding configuration
Connection types:	Clamp | Flange | Spigot | Threaded connection
Connection standards:	ANSI | ASME | BS | DIN | EN | ISO | JIS | SMS
Body materials:	1.4408, investment casting material | 1.4435 (316L), forged material | 1.4435 (BN2), forged material | 1.4435, investment casting material | 1.4539 (904L), forged material
Body lining:	PFA
Diaphragm materials:	EPDM | FKM | PTFE/EPDM | PTFE/PVDF/EPDM
Conformities:	3A | CRN | EAC | FDA | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act) | USP

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GW-654

GEMÜ 655
Manually operated full bore diaphragm valve

The GEMÜ 655 2/2-way diaphragm valve has a metal handwheel and is manually operated. The valve body has a full bore design.

Features

- High mechanical stability
- High flow rate due to straight through flow
- Can be retrofitted with a pneumatic actuator

Technical specifications

Media temperature :	0 to 100 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	0 to 7 bar
Nominal sizes:	DN 25 to 300
Body configurations:	2/2-way body
Connection types:	Flange
Connection standards:	ANSI | EN | ISO
Body materials:	EN-GJL-250, cast iron material | EN-GJS-400-18-LT, SG iron material | EN-GJS-500-7, ductile iron material
Body lining:	Butyl | Hard rubber | Soft rubber
Diaphragm materials:	CR | EPDM | IIR | NBR | NR
Conformities:	CRN | EAC

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GW-655

Manually operated diaphragm valves made of plastic

Overview

GEMÜ type	607	617	R677
			
Special feature	Angle valve body		High-Flow valve body
Nominal sizes	DN 10	DN 12 to 20	DN 15 to 100
Media temperature	-10 to 80 °C	-10 to 80 °C	-10 to 80 °C
Ambient temperature	-10 to 50 °C	-10 to 50 °C	-10 to 50 °C
Operating pressure	0 to 10 bar	0 to 6 bar	0 to 10 bar
Connection types			
Flange	-	-	●
Flare	-	●	-
Solvent cement socket	-	●	-
Spigot	●	●	●
Threaded connection	-	●	-
Union end	-	●	●
Body materials			
ABS	-	-	●
Inliner PP-H/outliner PP	-	-	●
Inliner PVDF/outliner PP	-	-	●
PP	-	●	●
PP-H	●	●	-
PVC-U	●	●	●
PVDF	●	●	●
Conformities			
ACS	-	-	●
EAC	●	●	●
FDA	●	●	●
NSF	-	●	●

Technical data depends on the respective configuration - see datasheet or Product Selection Tool

GEMÜ 607
Manually operated diaphragm valve

TheGEMÜ 607 2/2-way diaphragm valve has a low maintenance plastic bonnet and is manually operated. An integral optical position indicator is standard.

Features

- Compact design
- Integral optical position indicator
- Angle valve bodies save on additional holes in the pipe bends

Technical specifications

Media temperature :	-10 to 80 °C
Ambient temperature:	-10 to 50 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 10 to 10
Body configurations:	Angle valve body
Connection types:	Spigot
Connection standards:	DIN
Body materials:	PP-H, grey | PVC-U, grey | PVDF
Diaphragm materials:	EPDM | FKM | PTFE/EPDM
Conformities:	EAC | FDA

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GW-607

GEMÜ 617
Manually operated diaphragm valve

The GEMÜ 617 2/2-way diaphragm valve has a low maintenance plastic bonnet and is manually operated. An integral optical position indicator is standard.

Features

- High flow rate
- Integral optical position indicator
- Choice of various body materials and connection types

Technical specifications

Media temperature :	-10 to 80 °C
Ambient temperature:	-10 to 50 °C
Operating pressure :	0 to 6 bar
Nominal sizes:	DN 12 to 20
Body configurations:	2/2-way body
Connection types:	Flare I Solvent cement socket I Spigot I Threaded connection I Union end
Connection standards:	BS I DIN I ISO
Body materials:	PP, reinforced I PP-H, natural I PVC-U, grey I PVDF
Diaphragm materials:	EPDM I FKM I NBR I PTFE/EPDM
Conformities:	EAC I FDA I NSF

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GW-617

GEMÜ R677
Manually operated diaphragm valve

The GEMÜ R677 2/2-way diaphragm valve has a low maintenance plastic actuator and is manually operated. An integrated optical position indicator is standard. The high-flow valve body provides compact dimensions at high flow rates.

Features

- Same mounting height planes over multiple nominal sizes
- Integral optical position indicator
- Compact system design thanks to flow-optimized high-flow valve bodies

Technical specifications

Media temperature :	-10 to 80 °C
Ambient temperature:	-10 to 50 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 15 to 100
Body configurations:	2/2-way body
Connection types:	Flange | Spigot | Union end
Connection standards:	ANSI | ASTM | BS | DIN | EN | ISO | JIS
Body materials:	ABS | Inliner PP-H, grey / outliner PP, reinforced | Inliner PVDF/outliner PP, reinforced | PP, reinforced | PVC-U, grey | PVDF
Diaphragm materials:	EPDM | FKM | NBR | PTFE/EPDM
Conformities:	ACS | EAC | FDA | NSF

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GW-R677

Pneumatically operated diaphragm valves made of metal

M-block diaphragm valves

GEMÜ P600M
M-block plastic diaphragm valve

The GEMÜ P600M plastic M-block diaphragm valve comprises one or more diaphragm valve seats. These can be equipped with manual, pneumatic and motorized actuators. The downstream media is isolated using a diaphragm.

Features

- Combining several valves and pipe sections in one compact unit
- Reduced installation space
- Combining several functions in one block: Control, batch, distribute, flush, etc.
- Reduced number of welded and solvent cemented joints in the plant
- Customised block construction

also as control valve

Technical specifications

Media temperature :	-10 to 80 °C
Ambient temperature:	-10 to 50 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 6 to 50
Body configurations:	Multi-port body
Connection types:	Clamp I Spigot I Threaded connection I Union end
Connection standards:	ASME I DIN I ISO
Body materials:	PP-H, grey I PP-H, natural I PVC-U, grey I PVDF
Diaphragm materials:	EPDM I FKM I NBR I PTFE/EPDM

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GW-P600M

GEMÜ P600M
M-block stainless steel diaphragm valve

The GEMÜ P600M stainless steel M-block diaphragm valve comprises one or more diaphragm valve seats. It is possible to choose between manual, pneumatic and motorized actuator versions. The downstream media is isolated using a diaphragm.

Features

- Space savings thanks to compact design
- Individual, customized and flexible design
- Reduced deadleg
- Fewer connection points and weld seams
- Huge variety of functions combined in the smallest of spaces
- Wide range of adaptation options from measurement and control systems, in addition to accessories
- Optimized draining design

Technical specifications

Media temperature :	-10 to 100 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 4 to 150
Body configurations:	Multi-port body
Connection types:	Clamp I Flange I Spigot I Threaded connection
Connection standards:	ANSI I ASME I BS I DIN I EN I ISO I JIS I SMS
Body materials:	1.4435 (316L), block material I 1.4435 (BN2), block material I 1.4539 (904L), block material
Diaphragm materials:	EPDM I PTFE/EPDM
Conformities:	3A I BSE/TSE I CRN I EAC I FDA I Regulation (EC) No. 1935/2004 I USP

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GW-P600M

GEMÜ P600S
M-block diaphragm valve with flexible connection system

The GEMÜ P600S valve block made of plastic comprises two or three diaphragm valve seats. These can be equipped with manual, pneumatic and motorized actuators. The downstream media is isolated using a diaphragm at the valve seat.

Features

- Nominal pressure PN 10
- Various actuator versions available
- Connection system can subsequently be replaced
- Individually extendable block
- Combining several valves and pipe sections in one compact unit
- Reduction of the footprint
- Combining several functions in one block: Control, batch, distribute, etc.
- Reduced number of welded and solvent cemented joints in the plant
- Low maintenance

Technical specifications

Media temperature :	5 to 80 °C
Ambient temperature:	5 to 50 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 8 to 25
Connection types:	Spigot I Threaded connection I Union end
Body materials:	PP-H, grey I PVC-U
Diaphragm materials:	EPDM I FKM I NBR I PTFE/EPDM

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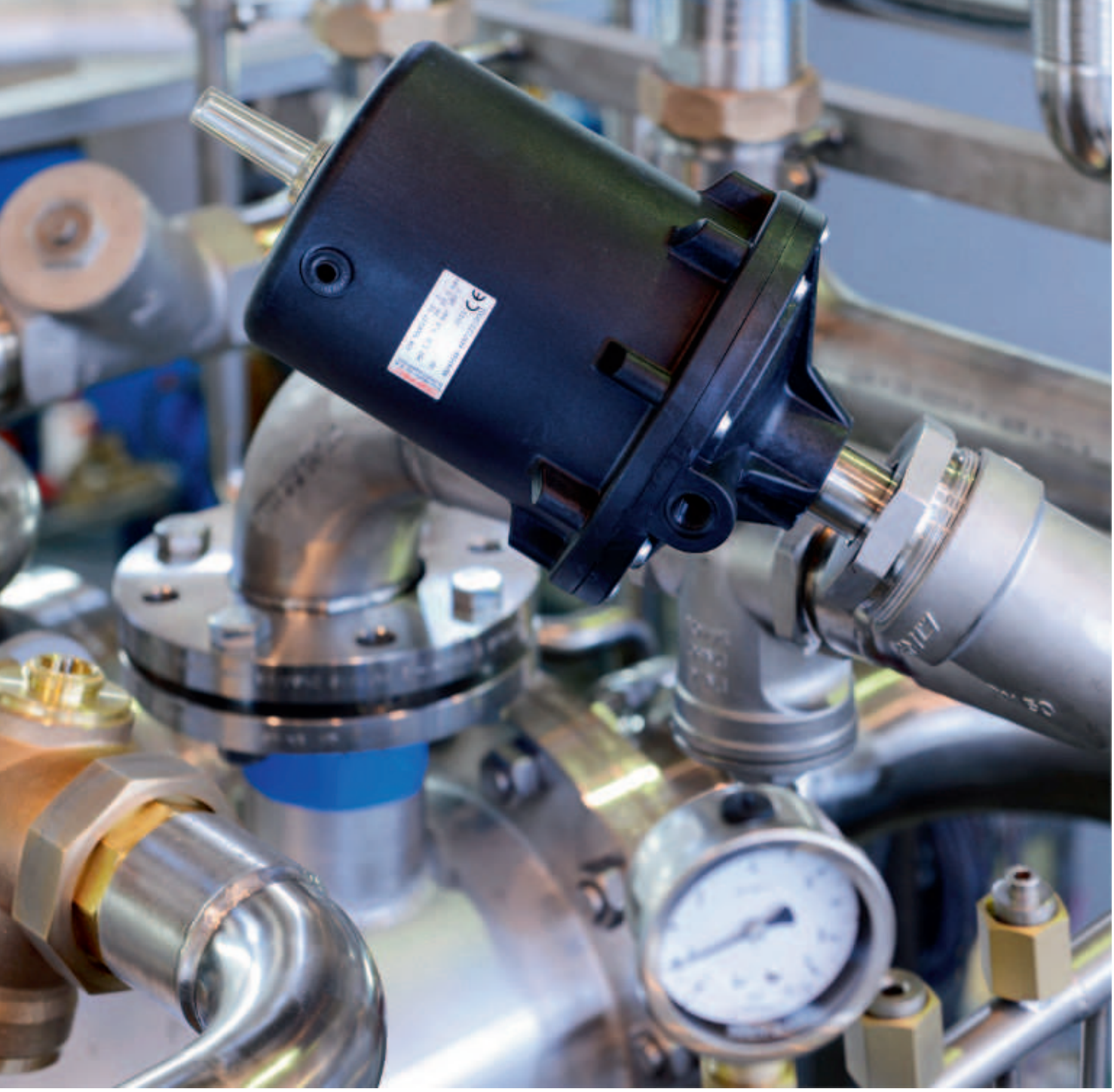
GW-P600S



Globe valves

Description

Globe valves are suitable for clean, liquid media, as well as gases and steam. Due to the linear movement and favourable mechanical conditions, they often take on automated tasks. Particularly in small nominal sizes, they are very suitable for fast cycle duties and high switching frequencies. In conjunction with the relevant positioners and regulating cones, they are the best possible control valves.

Further information can be found in the control systems section.

Features

- Fast cycle duties
- High switching frequencies
- Very good control characteristics

Typical working media

- Liquids: Water, glycol, cooling lubricant, sodium hydroxide
- Steam: Black steam, saturated steam
- Gases: Air, nitrogen, oxygen

Applications

- Generation and distribution of industrial and sterile steam, industrial gas, compressed air, biogas
- Batch and filling processes
- Heat exchangers and heating systems
- Heating and cooling processes in machines, systems and buildings
- Steam control for humidity regulation in production plants and buildings
- Dyeing and cleaning
- Filter systems and filter cleaning
- EPS machinery
- Parts cleaning
- Distribution of cooling lubricants in machining centres
- Water treatment: Evaporator, reverse osmosis
- PSA (pressure swing adsorption) systems: Nitrogen generators, oxygen generators

Functional principle of globe valves

Open

Closed

Seat seal

For soft-seated angled and straight globe valves, the seat seal is pressed against a valve seat using the force applied in the positioning element. The seat seal is stabilized here with a valve plug. The volumetric flow is shut off on the circular edge that emerges from the compression of the seat on the valve seat.

The tightness of the valve depends on factors including the chemical compatibility of the working medium.
A PTFE gasket is used as a standard seal for the valve seats of GEMÜ globe valves. Furthermore, elastomer and metal seals are also available.

Gland packing

The gland packing seals the valve spindle in the direction of the actuator. It prevents both emission of the working medium into the actuator and penetration of foreign matter into the working medium from outside. At high temperatures, GEMÜ uses special seal materials or stainless steel bellows. Special applications which require NBR seals or other special versions, for example, are available on request.

Advantages of GEMÜ:

- As standard, they are suitable for use in a vacuum up to 20 mbar (absolute)
- Designed for fast cycle duties and high numbers of switching cycles
- Self-adjusting gland packing
- Special versions with bellows up to 300 °C

The stainless steel bellows take on the function of the gland packing. It is preferred for use in high-vacuum applications and/or high media temperatures.
At high temperatures, it should, ideally, be combined with a metallic seat seal at the seat.

Globe valve seal system

Bellows valve open

Bellows valve closed

Modular system for globe valves

With the GEMÜ modular system, we offer you the opportunity to put together a suitable valve in line with your requirements. Discover all configuration options at ***www.gemu-group.com***

Measurement and control technology
Electrical position indicators and combi switchboxes | Positioners and process controllers | Accessories



Actuators
Manual | Pneumatic | Motorized
Metal | Plastic



Valve plug
Rigid | Flexible



Body
Angle seat body | Straight seat body | Multi-port body | Angle valve body



Configure your valve online
at **www.gemu-group.com**

Globe valve bodies

The variety of areas of application for globe valves also demands a variety of requirements from the valve. To satisfy these requirements, GEMÜ offers different body configurations that can be combined with GEMÜ gland packing and actuators in accordance with the modular system.

With our wide selection of connections and materials, we can cater to industrial process requirements on a case-by-case basis.

Globe valve

- DN 15 to 150
- Ideally suited for control applications

Angle seat globe valve

- DN 6 to 80
- Reduced vertical installation space
- Reduced pressure loss and higher flow rates

3/2-way globe valve

- DN 15 to 100
- Ideal for mixing, separating, aerating and de-aerating

Angle globe valve

- Saves an additional pipe bend
- Compact design

Please note the flow direction
The preferred flow direction is *under the seat*. With the flow direction *over the seat*, there is a risk of water hammers. They can damage the valve and other system components. The flow direction for GEMÜ valves is permanently marked on the body.

Manually operated globe valves

Overview

GEMÜ type	505	507	537	566
				
Nominal sizes	DN 8 to 80	DN 6 to 80	DN 15 to 50	DN 8 to 20
Media temperature	-10 to 185 °C	-10 to 210 °C	-10 to 210 °C	0 to 90 °C
Ambient temperature	-10 to 60 °C	-10 to 60 °C	-10 to 60 °C	-15 to 60 °C
Operating pressure	0 to 10 bar	0 to 25 bar	0 to 40 bar	0 to 6 bar
Connection types				
Clamp	●	●	-	●
Flange	-	●	●	-
Spigot	●	●	-	-
Threaded connection	-	●	-	●
Body configurations				
2/2-way body	●	●	●	●
Angle valve body	-	●	-	-
Body materials				
1.4408	-	●	●	-
1.4435	●	●	-	●
1.4435 (316L)	●	●	-	-
EN-GJS-400-18-LT	-	-	●	-
Conformities				
ATEX	●	●	●	-
CRN	●	●	●	-
EAC	●	●	●	●
FDA	●	●	●	●
Oxygen	-	●	●	-
Reg. (EU) No. 10/2011	●	●	●	-
Regulation (EC) No. 1935/2004	●	●	●	●
Regulation (EC) No. 2023/2006	●	●	●	-
TA Luft (German Clean Air Act)	-	●	●	-
USP	●	●	●	-

GEMÜ 505
Manually operated angle seat globe valve

The GEMÜ 505 2/2-way angle seat globe valve has a plastic handwheel resistant to high temperatures and is manually operated. The valve is suitable for pure steam and gaseous media. The sealing at the valve seat is made of PTFE. The valve spindle is sealed with a stainless steel bellows. Valve plug and valve spindle are welded together to prevent dirt ingress.

Features

- Free from non-ferrous metals
- Welded valve plug/valve spindle design to remove possible contamination areas
- Low maintenance, fixed seat plug (without threads)
- Stainless steel bellows as spindle seal for high operating temperatures
- Batch traceability for all media-wetted components

Technical specifications

Media temperature :	-10 to 185 °C
Ambient temperature:	-10 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 8 to 80
Body configurations:	2/2-way body
Connection types:	Clamp | Spigot
Connection standards:	ASME | DIN | EN | ISO
Body materials:	1.4435 (316L), block material | 1.4435, investment casting material
Seat seal materials:	PTFE
Conformities:	ATEX | CRN | EAC | FDA | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | USP

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GW-505

GEMÜ 507
Manually operated angle seat globe valve

The GEMÜ 507 2/2-way angle seat globe valve has an ergonomically designed plastic handwheel and is manually operated. A wiper ring fitted in front of the gland packing protects the seal against contamination and damage. A wiper ring fitted in front of the gland packing protects the seal against contamination and damage.

Features

- Available as shut-off or control valve
- High flow rates due to angle seat design
- Suitable for vacuum up to 20 mbar (a)
- Handwheel locknut for fixing the spindle, in order to set a continuous flow rate

Technical specifications

Media temperature :	-10 to 210 °C
Ambient temperature:	-10 to 60 °C
Operating pressure :	0 to 25 bar
Nominal sizes:	DN 6 to 80
Body configurations:	2/2-way body | Angle valve body
Connection types:	Clamp | Flange | Spigot | Threaded connection
Connection standards:	ANSI | ASME | BS | DIN | EN | ISO | JIS | NPT | SMS
Body materials:	1.4408, investment casting material | 1.4435 (316L), block material | 1.4435 (316L), forged material | 1.4435, investment casting material
Seat seal materials:	PEEK | PTFE | PTFE, reinforced
Conformities:	ATEX | CRN | EAC | FDA | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act) | USP

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GW-507

GEMÜ 537
Manually operated globe valve

The GEMÜ 537 2/2-way globe valve has an ergonomically designed plastic handwheel and is manually operated. A wiper ring fitted in front of the gland packing protects the seal against contamination and damage. A wiper ring fitted in front of the gland packing protects the seal against contamination and damage. A handwheel extension available as an option enables installation of the valve in insulated pipelines.

Features

- High flow rates and compact design
- Continuous series with SG iron and stainless steel bodies
- Can be retrofitted with a pneumatic actuator
- Seat seal made of PTFE or PTFE/glass fibre
- Suitable for vacuum up to 20 mbar (a)
- Handwheel locknut for fixing the spindle, in order to set a continuous flow rate

Technical specifications

Media temperature :	-10 to 210 °C
Ambient temperature:	-10 to 60 °C
Operating pressure :	0 to 40 bar
Nominal sizes:	DN 15 to 50
Body configurations:	2/2-way body
Connection types:	Flange
Connection standards:	ANSI | ASME | EN | ISO | JIS
Body materials:	1.4408, investment casting material | EN-GJS-400-18-LT, SG iron material
Seat seal materials:	PTFE, reinforced
Conformities:	ATEX | CRN | EAC | FDA | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act) | USP

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GW-537

GEMÜ 566
Manually operated control valve

The GEMÜ 566 eSyStep 2/2-way straight seat control valve has a body with an integrated control mechanism. Manual, pneumatic and motorized actuator types are available. The GEMÜ 566 eSyStep control valve was specially developed for controlling small volumes and allows flow rates from 63 l/h to 2500 l/h.

Features

- Control of liquid and gaseous media from 63 to 2500 l/h
- Linear or equal-percentage control characteristic options
- Hermetic separation between medium and actuator
- Actuator and actuator type can be changed without draining or removing the valve body from the piping
- Various types of actuators available

Technical specifications

Media temperature :	0 to 90 °C
Ambient temperature:	-15 to 60 °C
Operating pressure :	0 to 6 bar
Nominal sizes:	DN 8 to 20
Body configurations:	2/2-way body
Connection types:	Clamp I Threaded connection
Connection standards:	ASME I DIN I EN I ISO
Body materials:	1.4435, investment casting material
Seat seal materials:	EPDM I FKM
Conformities:	EAC I FDA I Regulation (EC) No. 1935/2004

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GW-566

Multi-port and M-block globe valves

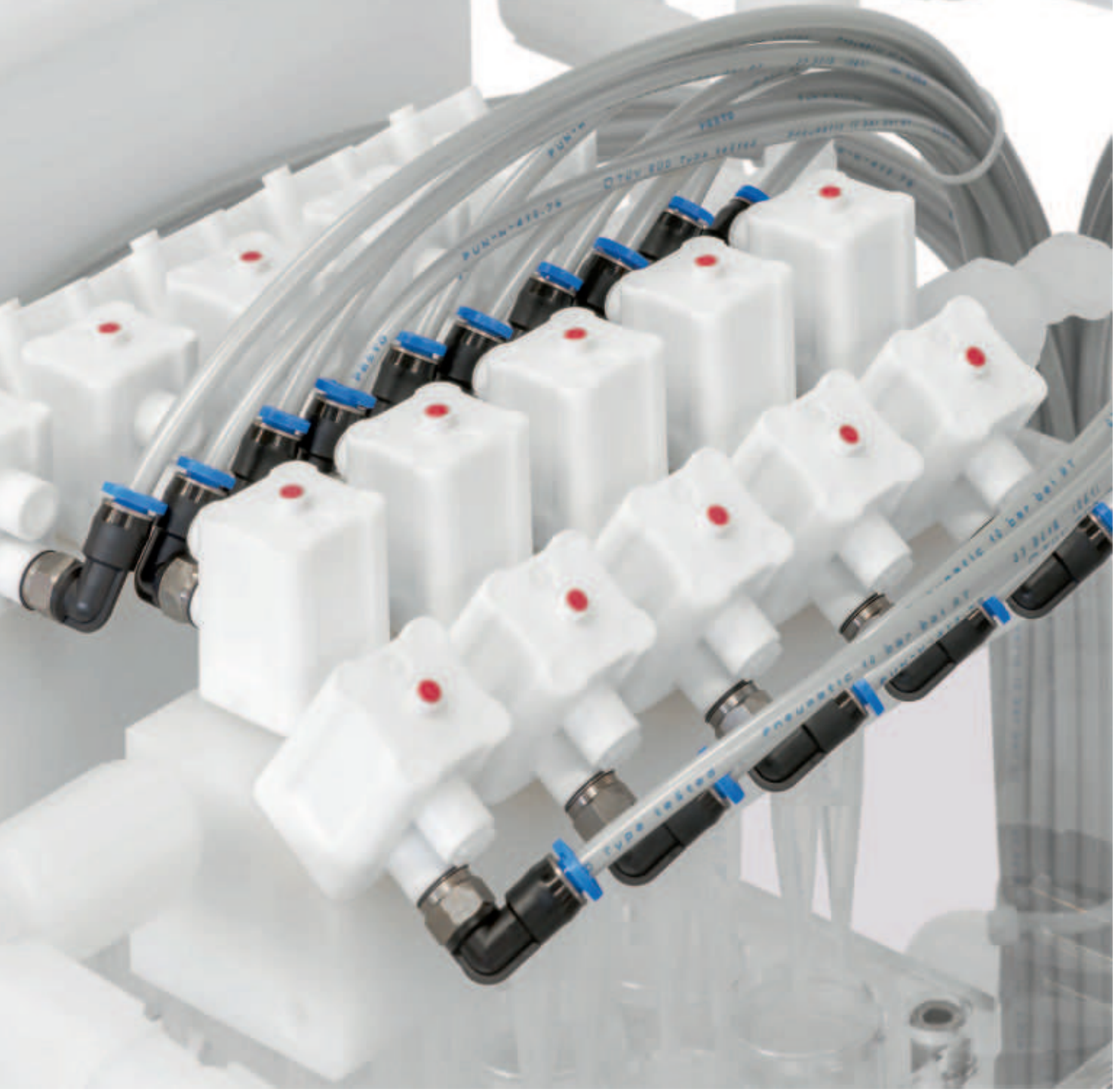
Overview

GEMÜ type	312	314	343 eSyDrive	352
				
Special feature	Robust actuator made from aluminium	Robust actuator made from aluminium	Premium actuator with integrated positioner and process controller	Light piston actuator made of plastic
Nominal sizes	DN 15 to 100	DN 15 to 50	DN 15 to 100	DN 15 to 100
Media temperature	-10 to 210 °C	-10 to 210 °C	-10 to 250 °C	-10 to 180 °C
Ambient temperature	-10 to 60 °C	-10 to 60 °C	-10 to 60 °C	-10 to 60 °C
Operating pressure	0 to 16 bar	0 to 16 bar	0 to 40 bar	0 to 16 bar
Connection types				
Clamp	-	-	-	-
Flange	●	-	●	●
Spigot	-	-	-	-
Threaded connection	-	●	●	-
Body materials				
1.4408	●	-	-	●
1.4435 (316L)	-	-	-	-
CC499K	-	●	-	-
Conformities				
ATEX	-	-	-	●
EAC	●	●	●	●
FDA	-	-	-	-
Oxygen	●	-	-	●
Reg. (EU) No. 10/2011	-	-	-	-
Regulation (EC) No. 1935/2004	-	-	-	-

Technical data depends on the respective configuration - see datasheet or Product Selection Tool

GEMÜ type	354	553	P500M
			
Special feature	Light piston actuator made of plastic	Flexible modular system	Individually configurable
Nominal sizes	DN 15 to 50	DN 15 to 20	DN 15 to 50
Media temperature	-10 to 180 °C	-10 to 180 °C	-10 to 180 °C
Ambient temperature	-10 to 60 °C	0 to 60 °C	0 to 60 °C
Operating pressure	0 to 16 bar	0 to 25 bar	0 to 25 bar
Connection types			
Clamp	-	-	●
Flange	-	-	-
Spigot	-	-	●
Threaded connection	●	●	●
Body materials			
1.4408	-	●	-
1.4435 (316L)	-	-	●
CC499K	●	-	-
Conformities			
ATEX	●	-	●
EAC	●	-	-
FDA	-	●	●
Oxygen	●	-	-
Reg. (EU) No. 10/2011	-	●	-
Regulation (EC) No. 1935/2004	-	●	●

Technical data depends on the respective configuration - see datasheet or Product Selection Tool



Diaphragm globe valves

Description

Valves that combine the advantages of the hermetic sealing of an actuator and the medium of a diaphragm valve with the advantages of a globe valve are designated as diaphragm globe valves.

GEMÜ diaphragm globe valves are suitable both for open/close applications and for control and dosing applications. The PTFE diaphragms that are used reliably isolate the medium from the actuator. The valves are easy to clean and, in comparison with valves with bellows, have significantly reduced deadlegs. A pretensioning element included in the actuator guarantees external leak tightness, even with temperature fluctuations and settling of the plastic parts. The valves are available with a straight through body, angle valve body or as M-block systems.

Features

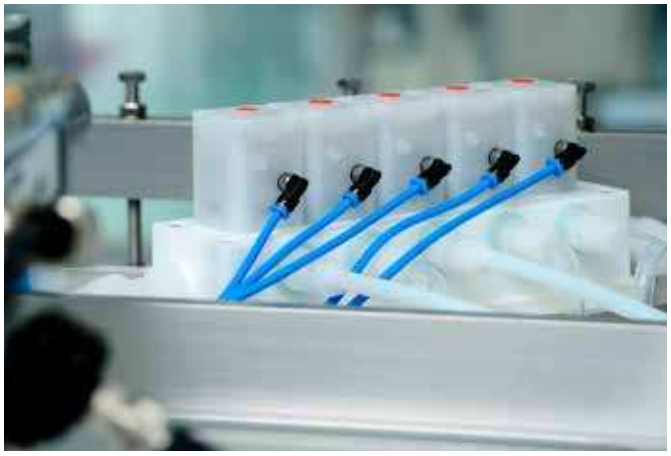
- CIP/SIP capable and autoclavable
- Available with linear or equal-percentage control characteristic
- Hermetic separation of the actuator from the medium using a sealing diaphragm
- High number of switching cycles
- Various valve body connections available
- Customized block designs possible
- Compact design
- No "lift effect" thanks to the use of the GEMÜ PD design

Typical working media

- Inert and corrosive media
- Liquids and gases

Applications

- Dosing at minimum quantities
- Suitable for media containing oil or grease
- Isolation of sensitive process media
- All types of media for filling machines (vacuum, liquid, gaseous)
- Filling processes in hygienic and aseptic plants in the pharmaceutical, biotechnology, food and beverage industries



Manually and pneumatically operated diaphragm globe valves

Overview

GEMÜ type	C51 iComLine	C57 iComLine	C50 iComLine
			
Connection sizes	1/4" to 1 1/4"	1/4" to 1 1/4"	1/4" to 1 1/4"
Media temperature	-10 to 150 °C	-10 to 150 °C	-10 to 150 °C
Ambient temperature	0 to 60 °C	0 to 60 °C	0 to 60 °C
Operating pressure	0 to 6 bar	0 to 6 bar	0 to 6 bar
Connection types			
Flare	●	●	●
PrimeLock®	●	●	●
Super 300 Type Pillar®	●	●	●
Body materials			
PFA	●	●	●
PTFE	●	●	●
Conformities			
EAC	●	●	●
FDA	●	●	●

GEMÜ C51 iComLine
Manually operated diaphragm globe valve

The GEMÜ C51 iComLine ultra-pure 2/2-way plastic diaphragm globe valve is manually operated using a hand lever (quarter turn). All media wetted parts are made of PFA or PTFE. The external actuator parts are made of PVDF. In addition to 2/2-way valve bodies, customized multi-port valve block solutions can be produced.

Features

- Low space requirement due to compact design
- Ideally suited for corrosive media
- High purity due to cleanroom manufacturing
- Manifolds are a space-saving design solution
- Choice of design with PTFE-coated screws and compression springs

Technical specifications

Media temperature :	-10 to 150 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	0 to 6 bar
Connection sizes:	1/4" to 1 1/4"
Body configurations:	2/2-way body I Multi-port body
Connection types:	Flare I PrimeLock® I Super 300 Type Pillar®
Body materials:	PFA I PTFE
Diaphragm materials:	PTFE
Conformities:	EAC I FDA

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GW-C51

GEMÜ C57 iComLine
Manually operated diaphragm globe valve

The GEMÜ C57 iComLine ultra-pure 2/2-way plastic diaphragm globe valve is manually operated using a handwheel. All media wetted parts are made of PFA or PTFE The external actuator parts are made of PVDF. The external actuator parts are made of PVDF. An integral optical position indicator is standard. In addition to 2/2-way valve bodies, customized multi-port valve block solutions can be produced.

Features

- Low space requirement due to compact design
- Ideally suited for corrosive media
- High purity due to cleanroom manufacturing
- Manifolds are a space-saving design solution
- Choice of design with PTFE-coated screws and compression springs

Technical specifications

Media temperature :	-10 to 150 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	0 to 6 bar
Connection sizes:	1/4" to 1 1/4"
Body configurations:	2/2-way body I Multi-port body
Connection types:	Flare I PrimeLock® I Super 300 Type Pillar®
Body materials:	PFA I PTFE
Diaphragm materials:	PTFE
Conformities:	EAC I FDA

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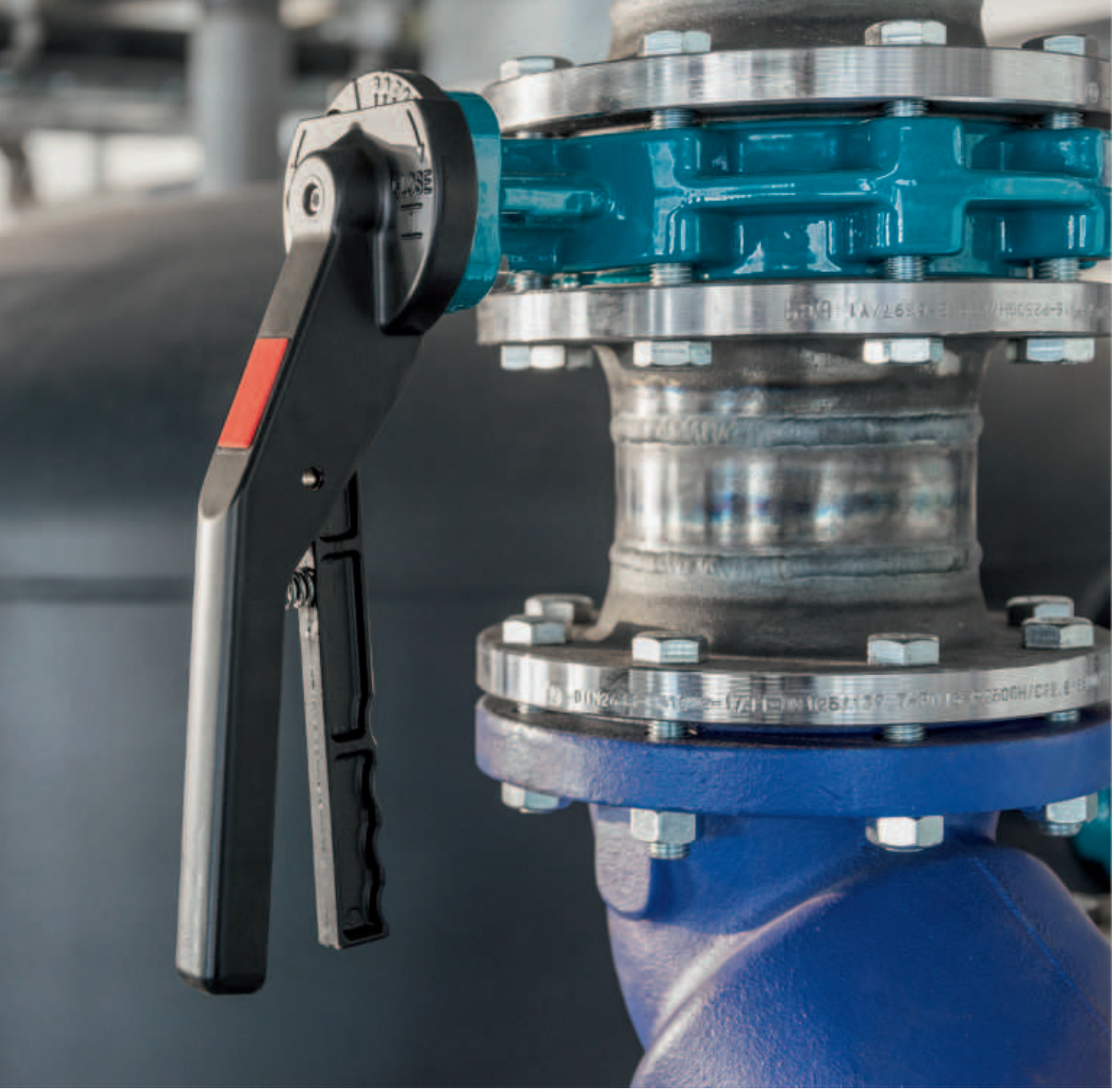
GW-C57



Butterfly valves

Description

If pipes are large, then butterfly valves are required. Most frequently, they are used for controlling mechanically pure liquids. In the right material combination, however, slightly abrasive liquids or gases pose no problem either. Due to the variety of materials, the GEMÜ butterfly valves are universally compatible, for example in various industrial applications, in drinking water and waste-water treatment and in the coastal and offshore applications.

For all nominal sizes, butterfly valves are effective as short shut-off valves with high flow rates. They are a cost-effective alternative to other valve types, where there are no stringent requirements regarding switching cycles, hygiene or control accuracy.

Features

- Large range of nominal sizes
- Short length
- Low weight
- Fast operating time
- Simple installation and low maintenance requirements

Typical working media

- Liquids: Water, oils, acids, alkalis, surfactants, solvents, heating media and coolants
- Gases: Steam, air, nitrogen, natural gas, noble gases, vapour
- Solids: Bulk materials

Applications

- Treatment of process water, drinking water, waste water
- Biogas plants
- Chemical industry
- Fertilizer chemicals and agrochemicals
- Irrigation systems
- Refineries and the petrochemical industry
- Surface finishing/paint shop and coating
- Heating and cooling systems
- Distribution of gas and water
- Swimming pool processes
- Ship and offshore area
- Textile industry
- Paper and woodpulp industry
- Steel works
- Mining

Functional principle of butterfly valves

Open

Closed

Butterfly valves comprise a ring-shaped housing into which a liner is inserted. When fully opened, the butterfly disc carried in a shaft is parallel to the flow direction. The disc is rotated by 90° into the gasket, which closes the butterfly valve. The liner isolates the inner housing from the medium and ensures that the butterfly valve is leak-tight inside and outside. When partially open, butterfly valves can also be used as control valves.

GEMÜ's butterfly discs are spherical and polished, and achieve particularly low torques thanks to the optimized sealing concept between disc, shaft and liner.

For control applications, GEMÜ offers adjusted position indicators as well as positioners and process controllers for quarter turn valves.

Flange connections are the standard connections for butterfly valves. A distinction is made between different body configurations:

Wafer body configuration

- Wafer-type flange design
- Low weight
- Optional installation position

Lug body configuration

- Flange-mounted design (can be used as end of line valve)
- Optimized pipe centering for mounting
- Simple installation
- Optional installation position

U section body configuration

- Flange-mounted design (can be used as end of line valve)
- Optimized pipe centering for mounting
- Simple installation
- Short installation length

Wafer

Lug

U section

Modular system for butterfly valves

With the GEMÜ modular system, we offer you the opportunity to put together a suitable valve in line with your requirements. Discover all configuration options at **www.gemu-group.com.**

Measurement and control technology
Electrical position indicators and combi switchboxes | Positioners and process controllers | Accessories



Actuators
Manual | Pneumatic | Motorized
Metal | Plastic



Liners and discs
Elastomer | Elastomer/thermoplastic
Metall | Plastic



Body
Metal | Plastic



Configure your valve online
at **www.gemu-group.com**

Overview of series

Different series are advantageous depending on the area of application, as each application has quite specific requirements for isolation technology. Due to the GEMÜ modular system, the materials for butterfly discs and liners can also be adjusted to the process parameters for each series.

All series are available both with manual, pneumatic or motorized actuators and with a bare shaft.

GEMÜ Victoria series

GEMÜ R480, R481, R487 and R488 Victoria; GEMÜ D480, D481, D487 and D488 Victoria

- Soft-seated butterfly valve
- All-rounder with a large variety of materials

GEMÜ Edessa series

GEMÜ 490, 491, 497 and 498 Edessa

- PTFE lined butterfly valve
- Suitable for corrosive chemical applications due to selection of highly resistant materials

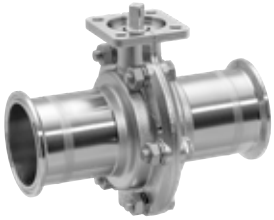
GEMÜ D450 series

GEMÜ D450, D451, D457 and D458

- Soft-seated butterfly valve made of corrosion-resistant plastic
- Disc outlet dimension designed on plastic piping

GEMÜ K415 series

GEMÜ K415, 411, 415 and 428



- Butterfly valve in stainless steel or brass
- Available in small nominal sizes

GEMÜ K410 series

GEMÜ K410, 410, 417 and 423

- Butterfly valve made of corrosion-resistant plastic
- Simple installation thanks to union nut

Butterfly valves with bare shaft made of metal

Overview

GEMÜ type	R480 Victoria	D480 Victoria	490 Edessa	K415	R470 Tugela
					
Media temperature	-10 to 160 °C	-60 to 210 °C	-20 to 200 °C	-20 to 160 °C	-60 to 230 °C
Operating pressure	0 to 16 bar	0 to 16 bar	0 to 10 bar	0 to 10 bar	0 to 40 bar
Nominal sizes	DN 25 to 600	DN 25 to 1600	DN 25 to 1200	DN 15 to 50	DN 50 to 600
Connection types (body configuration)					
Clamp	-	-	-	●	-
Flange (lug)	●	●	●	-	-
Flange (U section)	●	●	-	-	-
Flange (wafer)	●	●	●	-	●
Spigot	-	-	-	●	-
Threaded connection	-	-	-	●	-
Body materials					
1.0619	-	-	-	-	●
1.4408 (CF8M)	-	●	-	●	●
1.4435 (316L)	-	-	●	-	-
CW614N	-	-	-	●	-
CW617N	-	-	-	●	-
EN-AC-46100	-	●	-	-	-
EN-AC-47100	-	●	-	-	-
EN-GJS-400-15, coated	●	●	-	-	-
EN-GJS-400-18-LT, coated	●	●	●	-	-
S275JR, coated	-	●	-	-	-
S355J2 + N	-	-	●	-	-
VE Duroplast, reinforced	-	-	●	-	-
Liner materials					
CR	-	●	-	-	-
CSM (Hypalon®)	-	●	-	-	-
ECO	-	●	-	-	-
EPDM	●	●	-	●	-
FKM	●	-	-	●	-
NBR	●	●	-	-	-
PTFE TFM™	-	-	-	-	●
PTFE TFM™/EPDM	-	-	●	-	-
PTFE TFM™/FKM	-	-	●	-	-
PTFE TFM™/silicone	-	-	●	-	-
PTFE/EPDM	-	-	●	-	-
PTFE/FKM	-	-	●	-	-
PTFE/silicone	-	-	●	-	-
SBR, abrasion resistant	●	●	-	-	-
Silicone	●	●	-	●	-

Technical data depends on the respective configuration - see datasheet or Product Selection Tool

GEMÜ type	R480 Victoria	D480 Victoria	490 Edessa	K415	R470 Tugela
					
Disc materials					
1.4404 (316L)	-	-	●	-	-
1.4404 (316L), coated	-	-	●	-	-
1.4408	●	●	-	●	-
1.4408, coated	●	●	-	-	-
1.4408, polished	●	-	-	-	-
1.4469	-	●	●	-	-
1.4539	-	●	-	-	-
2.0975	-	●	-	-	-
2.4602 (alloy 22)	-	●	●	-	-
3.7035	-	-	●	-	-
CW614N	-	-	-	●	-
CW617N	-	-	-	●	-
EN-GJS-400-15, coated	●	●	-	-	-
Conformities					
ACS	●	●	-	-	-
ASME GEMÜ B31.3	●	-	-	-	-
ATEX	●	●	●	●	●
Belgaqua	●	-	-	-	-
DNV GL	●	●	-	-	-
DVGW Drinking water	●	●	-	-	-
DVGW Gas	●	●	-	-	-
EAC	●	●	●	●	●
FDA	●	●	●	●	●
Functional safety	●	-	●	-	-
NSF	●	-	-	-	-
Oxygen	●	-	-	-	-
Regulation (EC) No. 1935/2004	●	-	-	-	-
TA Luft (German Clean Air Act)	●	-	●	-	●
USP	-	-	●	-	-
WRAS	●	●	-	-	-

GEMÜ R480 Victoria
Butterfly valve with bare shaft

The GEMÜ R480 Victoria soft seated metal butterfly valve is equipped with a bare shaft with top flange in accordance with EN ISO 5211. The butterfly valve is available in nominal sizes DN 25 to 600 and in standard installation lengths ISO 5752/20 | EN 558-1/20 | API 609 category A (DIN 3202 K1) in wafer, lug and U section body versions.

Features

- Low torques thanks to PTFE coated bushes
- Bubble tight sealing, in accordance with EN 12266-1/P12, leak rate A
- Liner material is easy to read when installed
- Sleek disc design for higher Kv values
- Robust body coating comparable to ISO 12944-6 C5

Technical specifications

Media temperature :	-10 to 160 °C
Ambient temperature:	-10 to 70 °C
Operating pressure :	0 to 16 bar
Nominal sizes:	DN 25 to 600
Body configurations:	Lug | U section | Wafer
Connection standards:	ANSI | AS | BS | DIN | EN | ISO | JIS
Body materials:	EN-GJS-400-15, SG iron material | EN-GJS-400-18-LT, SG iron material
Body coating:	Epoxy
Liner materials:	EPDM | FKM | NBR | SBR, abrasion resistant | Silicone
Disc materials:	1.4408, investment casting material | 1.4408, polished investment casting material | 1.4469, Duplex cast steel material | EN-GJS-400-15, SG iron material
Disc coating:	Epoxy | Halar® | Rilsan®
Conformities:	ACS | ASME GEMÜ B31.3 | ATEX | Belgaqua | DNV GL | DVGW Drinking water | DVGW Gas | EAC | FDA | Functional safety | NSF | Oxygen | Regulation (EC) No. 1935/2004 | TA Luft (German Clean Air Act) | WRAS

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GW-R480

GEMÜ D480 Victoria
Butterfly valve with bare shaft

The GEMÜ D480 Victoria soft seated butterfly valve has a bare shaft. The butterfly valve is available in nominal sizes DN 25 to 1600 and in standard installation lengths ISO 5752/20 | EN 558-1/20 | API 609 category A (DIN 3202 K1) in wafer and lug body versions.

Features

- Available in large nominal sizes
- Special materials for disc, seal and valve body
- Vulcanizable liner
- Abrasion-resistant version possible

Technical specifications

Media temperature :	-60 to 210 °C
Ambient temperature:	-20 to 70 °C
Operating pressure :	0 to 16 bar
Nominal sizes:	DN 25 to 1600
Body configurations:	Lug | U section | Wafer
Connection standards:	ANSI | AS | ASME | AWWA | BS | DIN | EN | ISO | JIS
Body materials:	ASTM | EN-AC-46100, aluminium casting material | EN-AC-47100, aluminium casting material | EN-GJL-250 | EN-GJS-400-15, SG iron material | EN-GJS-400-18-LT, SG iron material | S275JR, cast steel material with epoxy coating
Body coating:	Epoxy
Liner materials:	CR | CSM (Hypalon®) | ECO | EPDM | NBR | SBR, abrasion resistant | Silicone
Disc materials:	1.4408, investment casting material | 1.4469, Duplex cast steel material | 1.4539, forged material | 2.0975, bronze casting material | 2.4602 (alloy 22), block material | EN-GJS-400-15, SG iron material
Disc coating:	EPDM | Epoxy | Halar® | NBR | Rilsan® | SBR
Conformities:	ACS | ATEX | DNV GL | DVGW Drinking water | DVGW Gas | EAC | FDA | WRAS

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GW-D480

GEMÜ 490 Edessa
Butterfly valve with bare shaft

The GEMÜ 490 Edessa PTFE-lined butterfly valve has a bare shaft. The disc and shaft are one piece; body and liner are available in different designs. The butterfly valve is available in nominal sizes DN 25 to 1200 (1"–48"), in the standardized installation lengths: ISO 5752/20 | EN 558-1/20 | API 609 category A (DIN 3202 K1) available in wafer and lug body versions.

Features

- Suitable for chemically corrosive media
- High-quality selection of materials can be combined in different ways
- High level of plant reliability thanks to one-piece shaft and spring-washer-supported seal system
- Long service life thanks to shaft bearings and special disc and liner geometry

Technical specifications

Media temperature :	-20 to 200 °C
Ambient temperature:	-20 to 95 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 25 to 1200
Body configurations:	Lug | Wafer
Connection standards:	AS | ASME | DIN | EN | ISO | JIS
Body materials:	1.4404, block material | EN-GJS-400-18-LT, SG iron material | S355J2 + N, cast steel material | VE Duroplast, reinforced
Body coating:	Epoxy
Liner materials:	PTFE TFM™/EPDM | PTFE TFM™/FKM | PTFE TFM™/silicone | PTFE/EPDM | PTFE/FKM | PTFE/silicone
Disc materials:	1.4404 (316L), forged material | 1.4469, Duplex cast steel material | 2.4602 (alloy 22), block material | 3.7035, titan
Disc coating:	PFA
Conformities:	ATEX | EAC | FDA | Functional safety | TA Luft (German Clean Air Act) | USP

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GW-490

GEMÜ K415
Butterfly valve with bare shaft

The GEMÜ K415 soft seated butterfly valve made from stainless steel or brass has a bare shaft with standardized actuator flange in accordance with ISO 5211. With its rounded and polished disc edges, the butterfly valve is optimized for frequent cycle duties. The surface of the butterfly valve can still be further finished. The butterfly valve is optionally available with FDA or in an ATEX version. Thanks to its modular construction, it is also available with a manual, pneumatic or motorized actuator.

Features

- High-quality butterfly valve made from stainless steel or brass
- Available in small nominal sizes
- Compact and robust body
- Suitable for vacuum applications and low temperatures

Technical specifications

Media temperature :	-20 to 160 °C
Ambient temperature:	-10 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 15 to 50
Connection types:	Clamp I Spigot I Threaded connection
Connection standards:	ASME I DIN I EN I ISO I SMS
Housing materials:	1.4408 (CF8M), investment casting material I CW614N, brass I CW617N, brass
Liner materials:	EPDM I FKM I Silicone
Disc materials:	1.4408, investment casting material I CW614N, brass I CW617N, brass
Conformities:	ATEX I EAC I FDA

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GW-K415

GEMÜ R470 Tugela
Double-eccentric butterfly valve with bare shaft

The GEMÜ R470 Tugela double-eccentric metal butterfly valve has a bare shaft with a top flange in accordance with EN ISO 5211. The butterfly valve is available in nominal sizes DN 50 to 600 and in standardized installation lengths API 609 category A (DIN 3202 K1).

Features

- High-performance butterfly valve with double-eccentric construction in order to separate the disc directly from the seat (gasket), thereby reducing friction and extending the service life
- Continuous shaft with temperature resistant graphite bearing and PTFE gland packing for readjustment in operation for minimized leakage, even at low pressures
- Antistatic fixture for ATEX area
- Bubble tight sealing, in accordance with EN 12266-1/P12, leak rate A

Technical specifications

Media temperature :	-60 to 230 °C
Ambient temperature:	-20 to 70 °C
Operating pressure :	0 to 40 bar
Nominal sizes:	DN 50 to 600
Body configurations:	Wafer
Connection standards:	ASME | ISO
Body materials:	1.0619 (WCB), cast steel material with CDP coating | 1.4408 (CF8M), investment casting material
Liner materials:	PTFE TFM™
Disc materials:	1.4408
Conformities:	ATEX | EAC | FDA | TA Luft (German Clean Air Act)

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GW-R470

Butterfly valves with bare shaft made of plastic

Overview

GEMÜ type	D450	K410
		
Media temperature	5 to 90 °C	0 to 60 °C
Operating pressure	0 to 10 bar	0 to 6 bar
Nominal sizes	DN 50 to 300	DN 15 to 50
Connection types		
Flange	●	-
Union end	-	●
Body materials		
PP	●	-
PVC-U	-	●
Liner materials		
EPDM	●	●
FKM	●	●
Silicone	-	●
Disc materials		
PP-H	●	●
PVC-C	●	-
PVC-U	●	-
Conformities		
EAC	●	●
Pressure Equipment Directive	●	-
RoHS	●	-

GEMÜ D450
Butterfly valve with bare shaft

The GEMÜ D450 soft seated butterfly valve has a bare shaft. The butterfly valve is available in nominal sizes DN 50–300 and has a wafer body version.

Features

- Simple installation
- Low pressure loss
- Low weight
- Excellent corrosion protection
- UV resistant
- Optimized for installation in plastic piping
- Low torque

Technical specifications

Media temperature :	5 to 90 °C
Ambient temperature:	-20 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 50 to 300
Body configurations:	Wafer
Connection standards:	ANSI | EN | JIS
Body materials:	PP, reinforced
Liner materials:	EPDM | FKM
Disc materials:	PP-H | PVC-C | PVC-U
Conformities:	EAC

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GW-D450

GEMÜ K410
Butterfly valve with bare shaft

The GEMÜ K410 butterfly valve has a bare shaft. The GEMÜ RSK check valve is available in plastic.

Features

- Low weight
- Corrosion resistant plastic body
- Simple installation with union nut

Technical specifications

Media temperature :	0 to 60 °C
Ambient temperature:	-10 to 60 °C
Operating pressure :	0 to 6 bar
Nominal sizes:	DN 15 to 50
Connection types:	Union end
Connection standards:	BS | DIN
Housing materials:	PVC-U, grey
Liner materials:	EPDM | FKM | Silicone
Disc materials:	PP-H
Conformities:	EAC

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GW-K410

Manually operated butterfly valves made of metal

Overview

GEMÜ type	R487 Victoria	D487 Victoria	497 Edessa	411	R477 Tugela
					
Media temperature	-10 to 160 °C	-60 to 210 °C	-20 to 200 °C	-20 to 120 °C	-60 to 230 °C
Operating pressure	0 to 16 bar	0 to 16 bar	0 to 10 bar	0 to 10 bar	0 to 40 bar
Nominal sizes	DN 25 to 600	DN 25 to 1600	DN 25 to 600	DN 15 to 50	DN 50 to 400
Connection types (body configuration)					
Clamp	-	-	-	●	-
Flange (lug)	●	●	●	-	-
Flange (U section)	●	●	-	-	-
Flange (wafer)	●	●	●	-	●
Spigot	-	-	-	●	-
Threaded connection	-	-	-	●	-
Body materials					
1.0619	-	-	-	-	●
1.4408	-	-	-	●	-
1.4408 (CF8M)	-	●	-	-	●
1.4435 (316L)	-	-	●	-	-
CW614N	-	-	-	●	-
CW617N	-	-	-	●	-
EN-AC-46100	-	●	-	-	-
EN-AC-47100	-	●	-	-	-
EN-GJS-400-15, coated	●	●	-	-	-
EN-GJS-400-18-LT, coated	●	●	●	-	-
S275JR, coated	-	●	-	-	-
S355J2 + N	-	-	●	-	-
VE Duroplast, reinforced	-	-	●	-	-
Liner materials					
CR	-	●	-	-	-
CSM (Hypalon®)	-	●	-	-	-
ECO	-	●	-	-	-
EPDM	●	●	-	●	-
FKM	●	-	-	●	-
NBR	●	●	-	-	-
PTFE TFM™	-	-	-	-	●
PTFE TFM™/EPDM	-	-	●	-	-
PTFE TFM™/FKM	-	-	●	-	-
PTFE TFM™/silicone	-	-	●	-	-
PTFE/EPDM	-	-	●	-	-
PTFE/FKM	-	-	●	-	-
PTFE/silicone	-	-	●	-	-
SBR, abrasion resistant	●	●	-	-	-
Silicone	●	●	-	●	-

Technical data depends on the respective configuration - see datasheet or Product Selection Tool

GEMÜ type	R487 Victoria	D487 Victoria	497 Edessa	411	R477 Tugela
					
Disc materials					
1.4404 (316L)	-	-	●	-	-
1.4404 (316L), coated	-	-	●	-	-
1.4408	●	●	-	●	-
1.4408, coated	●	●	-	-	-
1.4408, polished	●	-	-	-	-
1.4469	-	●	●	-	-
1.4539	-	●	-	-	-
2.0975	-	●	-	-	-
2.4602 (alloy 22)	-	●	●	-	-
3.7035	-	-	●	-	-
CW614N	-	-	-	●	-
CW617N	-	-	-	●	-
EN-GJS-400-15, coated	●	●	-	-	-
Conformities					
ACS	●	●	-	-	-
ASME GEMÜ B31.3	●	-	-	-	-
ATEX	●	-	●	-	●
Belgaqua	●	-	-	-	-
DNV GL	●	●	-	-	-
DVGW Drinking water	●	●	-	-	-
DVGW Gas	●	●	-	-	-
EAC	●	●	●	●	●
FDA	●	●	●	●	●
Functional safety	●	-	●	-	-
NSF	●	-	-	-	-
Oxygen	●	-	-	-	-
Regulation (EC) No. 1935/2004	●	-	-	-	-
TA Luft (German Clean Air Act)	●	-	●	-	●
USP	-	-	●	-	-
WRAS	●	●	-	-	-

GEMÜ R487 Victoria
Manually operated butterfly valve

The GEMÜ R487 Victoria soft seated metal butterfly valve is manually operated. It has a hand lever or gearbox depending on customer requirements. The butterfly valve is available in nominal sizes DN 25 to 600 and in standard installation lengths ISO 5752/20 | EN 558-1/20 | API 609 category A (DIN 3202 K1) in wafer, lug and U section body versions.

Features

- Low torques thanks to PTFE coated bushes
- Bubble tight sealing, in accordance with EN 12266-1/P12, leak rate A
- Liner material is easy to read when installed
- Sleek disc design for higher Kv values
- Robust body coating comparable to ISO 12944-6 C5
- Various actuator types can be selected
- Optional accessories are installed, set and tested so they are ready for operation

Technical specifications

Media temperature :	-10 to 160 °C
Ambient temperature:	-10 to 70 °C
Operating pressure :	0 to 16 bar
Nominal sizes:	DN 25 to 600
Body configurations:	Lug | U section | Wafer
Connection standards:	ANSI | AS | BS | DIN | EN | ISO | JIS
Body materials:	EN-GJS-400-15, SG iron material | EN-GJS-400-18-LT, SG iron material
Body coating:	Epoxy
Liner materials:	EPDM | FKM | NBR | SBR, abrasion resistant | Silicone
Disc materials:	1.4408, investment casting material | 1.4408, polished investment casting material | 1.4469, Duplex cast steel material | EN-GJS-400-15, SG iron material
Disc coating:	Epoxy | Halar® | Rilsan®
Conformities:	ACS | ASME GEMÜ B31.3 | ATEX | Belgaqua | DNV GL | DVGW Drinking water | DVGW Gas | EAC | FDA | Functional safety | NSF | Oxygen | Regulation (EC) No. 1935/2004 | TA Luft (German Clean Air Act) | WRAS

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GW-R487

GEMÜ D487 Victoria
Manually operated butterfly valve

The GEMÜ D487 Victoria soft-seated butterfly valve is manually operated. It has a metal hand lever or gearbox depending on customer requirements. The butterfly valve is available in nominal sizes DN 25 to 1600 and in standardized installation lengths ISO 5752/20 | EN 558-1/20 | API 609 category A (DIN 3202 K1) in wafer, lug and U section body versions.

Features

- Available in large nominal sizes
- Special materials for disc, seal and valve body
- Vulcanizable liner
- Abrasion-resistant version possible

Technical specifications

Media temperature :	-60 to 210 °C
Ambient temperature:	-20 to 70 °C
Operating pressure :	0 to 16 bar
Nominal sizes:	DN 25 to 1600
Body configurations:	Lug | U section | Wafer
Connection standards:	ANSI | AS | ASME | AWWA | BS | DIN | EN | ISO | JIS
Body materials:	ASTM | EN-AC-46100, aluminium casting material | EN-AC-47100, aluminium casting material | EN-GJL-250 | EN-GJS-400-15, SG iron material | EN-GJS-400-18-LT, SG iron material | S275JR, cast steel material with epoxy coating
Body coating:	Epoxy
Liner materials:	CR | CSM (Hypalon®) | ECO | EPDM | NBR | SBR, abrasion resistant | Silicone
Disc materials:	1.4408, investment casting material | 1.4469, Duplex cast steel material | 1.4539, forged material | 2.0975, bronze casting material | 2.4602 (alloy 22), block material | EN-GJS-400-15, SG iron material
Disc coating:	EPDM | Epoxy | Halar® | NBR | Rilsan® | SBR
Conformities:	ACS | DNV GL | DVGW Drinking water | DVGW Gas | EAC | FDA | WRAS

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GW-D487

GEMÜ 497 Edessa
Manually operated butterfly valve

The GEMÜ 497 Edessa PTFE seal butterfly valve is manually operated. It has a metal hand lever or gearbox depending on customer requirements. Disc and shaft are one piece, body and liner are available in different designs. The butterfly valve is available in nominal sizes DN 25 to 600 and in standard installation lengths ISO 5752/20 | EN 558-1/20 | API 609 category A (DIN 3202 K1) in wafer and lug body versions.

Features

- Suitable for chemically corrosive media
- High-quality selection of materials can be combined in different ways
- High level of plant reliability thanks to one-piece shaft and spring-washer-supported seal system
- Long service life thanks to shaft bearings and special disc and liner geometry
- Lockable hand lever
- Optional stainless steel hand lever

Technical specifications

Media temperature :	-20 to 200 °C
Ambient temperature:	-20 to 95 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 25 to 600
Body configurations:	Lug | Wafer
Connection standards:	AS | ASME | DIN | EN | ISO | JIS
Body materials:	1.4404, block material | EN-GJS-400-18-LT, SG iron material | S355J2 + N, cast steel material | VE Duroplast, reinforced
Body coating:	Epoxy
Liner materials:	PTFE TFM™/EPDM | PTFE TFM™/FKM | PTFE TFM™/silicone | PTFE/EPDM | PTFE/FKM | PTFE/silicone
Disc materials:	1.4404 (316L), forged material | 1.4469, Duplex cast steel material | 2.4602 (alloy 22), block material | 3.7035, titan
Disc coating:	PFA
Conformities:	ATEX | EAC | FDA | Functional safety | TA Luft (German Clean Air Act) | USP

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GW-497

GEMÜ 411
Manually operated butterfly valve

The GEMÜ 411 soft seated butterfly valve made from stainless steel or brass has an ergonomically designed, corrosion-resistant plastic hand lever. It is protected against accidental operation by the integrated locking device. With its rounded and polished disc edges, the butterfly valve is optimized for frequent cycle duties. The surface of the butterfly valve can be further finished.

Features

- Suitable for vacuum applications and low temperatures
- High-quality butterfly valve made from stainless steel or brass
- Available in small nominal sizes
- Compact and robust body
- Ergonomically designed hand lever with integrated locking device

Technical specifications

Media temperature :	-20 to 120 °C
Ambient temperature:	-10 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 15 to 50
Connection types:	Clamp I Spigot I Threaded connection
Connection standards:	ASME I DIN I EN I ISO I SMS
Housing materials:	1.4408, investment casting material I CW614N, brass I CW617N, brass
Liner materials:	EPDM I FKM I Silicone
Disc materials:	1.4408, investment casting material I CW614N, brass I CW617N, brass
Conformities:	EAC I FDA

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GW-411

GEMÜ R477 Tugela
Manually operated butterfly valve

The GEMÜ R477 Tugela double eccentric metal butterfly valve is operated by a manual actuator. The butterfly valve is available in nominal sizes DN 50 to 400 and in standardized installation lengths API 609 category A (DIN 3202 K1).

Features

- High-performance butterfly valve with double-eccentric construction in order to separate the disc directly from the seat (gasket), thereby reducing friction and extending the service life
- Continuous shaft with temperature resistant graphite bearing and PTFE gland packing for readjustment in operation for minimized leakage, even at low pressures
- Antistatic fixture for ATEX area
- Various actuator types can be selected
- Bubble tight sealing, in accordance with EN 12266-1/P12, leak rate A

Technical specifications

Media temperature :	-60 to 230 °C
Ambient temperature:	-20 to 70 °C
Operating pressure :	0 to 40 bar
Nominal sizes:	DN 50 to 400
Body configurations:	Wafer
Connection standards:	ASME | ISO
Body materials:	1.0619 (WCB), cast steel material with CDP coating | 1.4408 (CF8M), investment casting material
Liner materials:	PTFE TFM™
Disc materials:	1.4408
Conformities:	ATEX | EAC | FDA | TA Luft (German Clean Air Act)

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GW-R477

Manually operated butterfly valves made of plastic

Overview

GEMÜ type	D457	417
		
Media temperature	5 to 90 °C	0 to 60 °C
Operating pressure	0 to 10 bar	0 to 6 bar
Nominal sizes	DN 50 to 300	DN 15 to 50
Connection types		
Flange	●	-
Union end	-	●
Body materials		
PP	●	-
PVC-U	-	●
Liner materials		
EPDM	●	●
FKM	●	●
Disc materials		
PP-H	●	●
PVC-C	●	-
PVC-U	●	-
Conformities		
EAC	●	●

GEMÜ D457
Manually operated butterfly valve

The GEMÜ D457 soft seated butterfly valve is manually operated. It has a metal hand lever or gearbox depending on customer requirements. The butterfly valve is available in nominal sizes DN 50–300 and has a wafer body version.

Features

- Low weight
- Corrosion resistant plastic body
- Disc outlet dimension designed on plastic piping
- Lockable hand lever made of plastic with latch positions

Technical specifications

Media temperature :	5 to 90 °C
Ambient temperature:	-20 to 60 °C
Operating pressure :	0 to 10 bar
Nominal sizes:	DN 50 to 300
Connection types:	Flange
Connection standards:	ANSI | EN | JIS
Housing materials:	PP, reinforced
Liner materials:	EPDM | FKM
Disc materials:	PP-H | PVC-C | PVC-U
Conformities:	EAC

Go online!

GW-D457

GEMÜ 417
Manually operated butterfly valve

The GEMÜ 417 butterfly valve has an ergonomically designed corrosion resistant plastic hand lever. It can be protected against accidental operation by the integrated locking device.

Features

- Low weight
- Corrosion resistant plastic body
- Simple installation with union nut
- Ergonomic handle with anti-twist system and locking device

Technical specifications

Media temperature :	0 to 60 °C
Ambient temperature:	-10 to 60 °C
Operating pressure :	0 to 6 bar
Nominal sizes:	DN 15 to 50
Connection types:	Union end
Connection standards:	BS | DIN
Housing materials:	PVC-U, grey
Liner materials:	EPDM | FKM
Disc materials:	PP-H
Conformities:	EAC

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GW-417

Pneumatically operated butterfly valves made of metal

Ball valves

Description

Ball valves are versatile and can also be used in extreme circumstances. With the ball that has been drilled through as a shut-off body, this valve type is particularly well-suited to safely shutting off liquid and gaseous media at a very high operating pressure. As media travels between the ball and the body when opening and closing, ball valves are suitable for mechanically pure, inert or corrosive liquids, gases or steam. Caution must be exercised with crystallizing media, as these can have a negative effect on functionality.

Features

- High flow rates
- Fast cycle duties
- High operating pressures
- High temperatures

Typical working media

- Liquids: Water, glycol, cooling lubricant
- Gases: Air, compressed air

Applications

- Generation and distribution of compressed air, water, industrial gas
- Batch and filling processes
- Heat exchangers and heating systems
- Heating and cooling processes in machines, systems and buildings
- Dyeing and cleaning
- Filter systems and filter cleaning

Functional principle of ball valves

Open

Closed

The ball valve comprises a ball valve with a hollow bore, which generally sits in a housing between PTFE sealing rings. The ball is connected via an externally positioned shaft. The valve can be opened and closed by rotating it through 90°.

The dead space needs to be taken into account for ball valves. Caution must be exercised with crystallizing media. If a medium is enclosed in the ball, this can have a negative impact on functionality and service life.

Ball ports

GEMÜ ball valves are available as both a 2/2-way straight through body and a 3/2-way valve with T or L ball. With these special designs, the ball valves can also be used to bypass the media flow at various outlets.

Full and reduced bore

There is a difference between ball valves with full bore and reduced bore. With a full bore, the hole in the ball has the same inside diameter as the connected piping. A major advantage of the version with full bore is that the full cross section of the pipe is free when open. This results in minimal pressure loss and a high Kvs value. This makes the ball valves ideal for high viscosity media, and they are the only valves that are also piggable.

In the design with reduced bore, the inside diameter in the area of the ball is reduced. An altered pressure structure is, therefore, generated in the valve and outlet distance.
The turbulence that this creates results in a jet effect that is, among other things, suitable for applications with dual-substance or multi-substance mixtures.

Modular system for ball valves

With the GEMÜ modular system, we offer you the opportunity to put together a suitable valve in line with your requirements. Discover all configuration options at ***www.gemu-group.com***

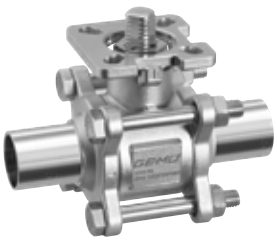
Measurement and control technology
Electrical position indicators and combi switchboxes | Positioners and process controllers | Accessories



Actuators
Manual | Pneumatic | Motorized
Metal | Plastic



Body
2/2-way body | Multi-port body
Metal | Plastic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at **www.gemu-group.com**

Ball valves with bare shaft

Overview

GEMÜ type	BB02	BB04	BB06	BB07
				
Special feature		Option with minimal deadleg and delta ferrite < 3 %	Compact length	3/2-way ball valve
Media temperature	-40 to 180 °C	-10 to 220 °C	-40 to 180 °C	-40 to 180 °C
Ambient temperature	-40 to 60 °C	-20 to 60 °C	-40 to 60 °C	-40 to 60 °C
Operating pressure	0 to 63 bar	0 to 63 bar	0 to 40 bar	0 to 40 bar
Nominal sizes	DN 8 to 100	DN 8 to 100	DN 15 to 100	DN 8 to 50
Connection types				
Clamp	-	●	-	-
Flange	●	-	●	-
Spigot	●	●	-	-
Threaded connection	●	-	-	●
Connection standards				
ANSI	-	-	●	-
ASME	●	●	-	-
DIN	●	●	-	●
EN	●	-	●	-
ISO	●	●	-	-
NPT	●	-	-	●
SMS	-	●	-	-
Body configurations				
2/2-way body	●	●	●	-
Multi-port body	-	-	-	●
Body materials				
1.4408	●	-	●	●
1.4435 (316L)	-	●	-	-
Conformities				
ASME GEMÜ B31.3	●	-	-	-
ATEX	●	●	●	●
EAC	●	●	●	-
FDA	●	●	●	-
Functional safety	●	-	●	●
Oxygen	●	-	-	-
Reg. (EU) No. 10/2011	●	●	●	-
Regulation (EC) No. 1935/2004	●	●	●	-
Regulation (EC) No. 2023/2006	●	-	●	-
TA Luft (German Clean Air Act)	●	●	●	-
USP	-	●	-	-

Technical data depends on the respective configuration - see datasheet or Product Selection Tool

GEMÜ BB02
Ball valve with bare shaft

The GEMÜ BB02 stainless steel 3-piece 2/2-way ball valve has a bare shaft. Thanks to the top flange according to ISO 5211, easy actuator mounting is possible.

Features

- Suitable for vacuum applications
- Low maintenance and reliable spindle sealing
- Antistatic device unit

Technical specifications

Media temperature :	-40 to 180 °C
Ambient temperature:	-40 to 60 °C
Operating pressure :	0 to 63 bar
Nominal sizes:	DN 8 to 100
Body configurations:	2/2-way body
Connection types:	Flange | Spigot | Threaded connection
Connection standards:	ASME | DIN | EN | ISO | NPT
Body materials:	1.4408, investment casting material
Seal materials:	PTFE
Conformities:	ASME GEMÜ B31.3 | ATEX | EAC | FDA | Functional safety | Oxygen | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act)
Media temperature :	-40 to 180 °C
Ambient temperature:	-40 to 60 °C
Operating pressure :	0 to 63 bar
Nominal sizes:	DN 8 to 100
Body configurations:	2/2-way body
Connection types:	Flange | Spigot | Threaded connection
Body materials:	1.4408, investment casting material
Seal materials:	PTFE

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GW-BB02

GEMÜ BB04
Ball valve with bare shaft

The three-piece 2/2-way GEMÜ BB04 metal ball valve with a bare shaft and an actuator flange in accordance with DIN ISO 5211 for simple mounting of various actuator types is particularly suited to applications in the supply sector for the pharmaceutical, foodstuffs processing and biotechnology (such as water treatment and steam generation) industries thanks to the 1.4435 stainless steel alloy material composition used (compliant with 316L) with a low delta ferrite proportion of < 3%. Only those plastics which are compliant with FDA, USP Class VI and Regulation (EU) No.10/2011 are used for the seals.

Features

- Checked delta ferrite material < 3% (1.4435)
- Material certificates for media wetted components
- Media wetted surfaces according to ASME SF5 (Ra 0.51 µm)
- Butt weld spigots in extended orbital welding design
- Optionally available with cavity-filled seat
- Suitable for vacuum applications
- Option: ATEX version
- Ball valve body, assembled free of oil/grease

Technical specifications

Media temperature :	-10 to 220 °C
Ambient temperature:	-20 to 60 °C
Operating pressure :	0 to 63 bar
Nominal sizes:	DN 8 to 100
Body configurations:	2/2-way body
Connection types:	Clamp I Spigot
Connection standards:	ASME I DIN I ISO I SMS
Body materials:	1.4435 (316L), investment casting material
Seal materials:	PTFE TFM™
Conformities:	ATEX I EAC I FDA I Reg. (EU) No. 10/2011 I Regulation (EC) No. 1935/2004 I TA Luft (German Clean Air Act) I USP

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GW-BB04

GEMÜ BB06
Compact flanged ball valve with bare shaft

The GEMÜ BB06 metal one-piece 2/2-way ball valve has a bare shaft. The seat seal is made of PTFE.

Features

- High flow rate
- Full-flow bore
- Compact design
- ATEX version available as an option

Technical specifications

Media temperature :	-40 to 180 °C
Ambient temperature:	-40 to 60 °C
Operating pressure :	0 to 40 bar
Nominal sizes:	DN 15 to 100
Body configurations:	2/2-way body
Connection types:	Flange
Connection standards:	ANSI | EN
Body materials:	1.4408, investment casting material
Seal materials:	PTFE
Conformities:	ATEX | EAC | FDA | Functional safety | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act)

Go online!

GW-BB06

GEMÜ BB07
3/2-way ball valve with bare shaft

The GEMÜ BB07 stainless steel 3/2-way ball valve has a bare shaft. Thanks to the top flange according to ISO 5211, easy actuator mounting is possible.

Features

- Suitable for vacuum applications
- Low maintenance and reliable spindle sealing
- Antistatic device unit

Technical specifications

Media temperature :	-40 to 180 °C
Ambient temperature:	-40 to 60 °C
Operating pressure :	0 to 40 bar
Nominal sizes:	DN 8 to 50
Body configurations:	Multi-port body
Connection types:	Threaded connection
Connection standards:	DIN | NPT
Body materials:	1.4408, investment casting material
Seal materials:	PTFE
Conformities:	ATEX | Functional safety

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GW-BB07

Manually operated ball valves made of metal

Overview

GEMÜ type	B20	B22	B24	B26	B27
					
Special feature	Two-piece 2/2-way ball valve	Three-piece body 2/2-way ball valve	Option with minimal deadleg and delta ferrite < 3 %	Compact length	3/2-way ball valve
Media temperature	-40 to 180 °C	-20 to 180 °C	-10 to 220 °C	-20 to 180 °C	-40 to 180 °C
Ambient temperature	-40 to 60 °C	-20 to 60 °C	-20 to 60 °C	-20 to 60 °C	-20 to 60 °C
Operating pressure	0 to 63 bar	0 to 63 bar	0 to 63 bar	0 to 40 bar	0 to 40 bar
Nominal sizes	DN 8 to 65	DN 8 to 100	DN 8 to 100	DN 15 to 100	DN 8 to 50
Connection types					
Clamp	-	-	●	-	-
Flange	-	●	-	●	-
Spigot	-	●	●	-	-
Threaded connection	●	●	-	-	●
Connection standards					
ANSI	-	-	-	●	-
ASME	-	●	●	-	-
DIN	●	●	●	-	●
EN	-	●	-	●	-
ISO	-	●	●	-	-
NPT	●	●	-	-	●
SMS	-	-	●	-	-
Body configurations					
2/2-way body	●	●	●	●	-
Multi-port body	-	-	-	-	●
Body materials					
1.4408	●	-	-	●	●
1.4435 (316L)	-	-	●	-	-
Conformities					
ASME GEMÜ B31.3	-	●	-	-	-
ATEX	-	●	●	●	●
DVGW Gas	●	-	-	-	-
EAC	●	●	●	●	-
FDA	●	●	●	●	-
Functional safety	●	-	-	-	-
Oxygen	-	●	-	-	-
Reg. (EU) No. 10/2011	●	●	●	●	-
Regulation (EC) No. 1935/2004	●	●	●	●	-
Regulation (EC) No. 2023/2006	-	●	-	●	-
TA Luft (German Clean Air Act)	-	●	●	●	-
USP	-	-	●	-	-

Technical data depends on the respective configuration - see datasheet or Product Selection Tool

GEMÜ B20
Manually operated ball valve

The GEMÜ B20 2-piece 2/2-way metal ball valve is manually operated. It has a plastic sleeved lockable hand lever. The seat seal is made of PTFE.

Features

- High flow rate
- Low weight
- Compact design
- Lockable hand lever

Technical specifications

Media temperature :	-40 to 180 °C
Ambient temperature:	-40 to 60 °C
Operating pressure :	0 to 63 bar
Nominal sizes:	DN 8 to 65
Body configurations:	2/2-way body
Connection types:	Threaded connection
Body materials:	1.4408, investment casting material
Seal materials:	PTFE

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GW-B20

GEMÜ B22
Manually operated 2/2-way ball valve

The GEMÜ B22 3-piece 2/2-way metal ball valve is manually operated. It has a plastic sleeved hand lever with a locking device. The seat seal is made of PTFE.

Features

- Suitable for vacuum applications
- Low maintenance and reliable spindle sealing
- Antistatic device unit

Technical specifications

Media temperature :	-20 to 180 °C
Ambient temperature:	-20 to 60 °C
Operating pressure :	0 to 63 bar
Nominal sizes:	DN 8 to 100
Body configurations:	2/2-way body
Connection types:	Flange I Spigot I Threaded connection
Body materials:	1.4408, investment casting material
Seal materials:	PTFE

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GW-B22

GEMÜ B24
Manually operated ball valve

The GEMÜ B24 3-piece body 2/2-way metal ball valve is manually operated. The 1.4435 stainless steel alloy material composition used for the ball valve body (compliant with 316L) with a low delta ferrite proportion of < 3% is particularly suited to applications in the supply sector for the pharmaceutical, foodstuffs processing and biotechnology (such as water treatment and sterile steam generation) industries. Only those plastics which are compliant with FDA, USP Class VI and Regulation (EU) No.10/2011 are used for the seals.

Features

- Checked delta ferrite material < 3% (1.4435)
- Material certificates for media wetted components
- Media wetted surfaces according to ASME SF5 (Ra 0.51 µm)
- Butt weld spigots in extended orbital welding design
- Optionally available with cavity-filled seat
- Suitable for vacuum applications
- Option: ATEX version
- Ball valve body, assembled free of oil/grease

Technical specifications

Media temperature :	-10 to 220 °C
Ambient temperature:	-20 to 60 °C
Operating pressure :	0 to 63 bar
Nominal sizes:	DN 8 to 100
Body configurations:	2/2-way body
Connection types:	Clamp I Spigot
Connection standards:	ASME I DIN I ISO I SMS
Body materials:	1.4435 (316L), investment casting material
Seal materials:	PTFE TFM™
Conformities:	ATEX I EAC I FDA I Reg. (EU) No. 10/2011 I Regulation (EC) No. 1935/2004 I TA Luft (German Clean Air Act) I USP

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GW-B24

GEMÜ B26
Manually operated compact flanged ball valve

The GEMÜ B26 metal one-piece 2/2-way ball valve has a plastic sleeved hand lever. The seat seal is made of PTFE.

Features

- High flow rate
- Full-flow bore
- Compact design
- ATEX version available as an option

Technical specifications

Media temperature :	-20 to 180 °C
Ambient temperature:	-20 to 60 °C
Operating pressure :	0 to 40 bar
Nominal sizes:	DN 15 to 100
Body configurations:	2/2-way body
Connection types:	Flange
Connection standards:	ANSI | EN
Body materials:	1.4408, investment casting material
Seal materials:	PTFE
Conformities:	ATEX | EAC | FDA | Reg. (EU) No. 10/2011 | Regulation (EC) No. 1935/2004 | Regulation (EC) No. 2023/2006 | TA Luft (German Clean Air Act)

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GW-B26

GEMÜ B27
Manually operated 3/2-way ball valve

The GEMÜ B27 3/2-way metal ball valve is manually operated. It has a plastic sleeved hand lever with a locking device. The seat seal is made of PTFE.

Features

- High flow rate
- Full-flow bore
- Compact design
- ATEX version available as an option

Technical specifications

Media temperature :	-40 to 180 °C
Ambient temperature:	-20 to 60 °C
Operating pressure :	0 to 40 bar
Nominal sizes:	DN 8 to 50
Body configurations:	Multi-port body
Connection types:	Threaded connection
Connection standards:	DIN | NPT
Body materials:	1.4408, investment casting material
Seal materials:	PTFE
Conformities:	ATEX

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GW-B27

Manually operated ball valves made of plastic

Overview

GEMÜ type	717	S717
		
Special feature		For Group 2 fluids in accordance with PED 2014/68/EU
Media temperature	-20 to 100 °C	0 to 60 °C
Ambient temperature	-10 to 50 °C	0 to 60 °C
Operating pressure	0 to 16 bar	0 to 16 bar
Nominal sizes	DN 10 to 100	DN 10 to 100
Connection types		
Flange	●	●
Solvent cement socket	●	●
Spigot	●	●
Threaded connection	●	●
Union end	●	●
Connection standards		
ANSI	●	-
ASTM	-	●
BS	●	●
DIN	●	●
EN	●	-
ISO	●	-
JIS	●	-
NPT	●	●
Body configurations		
2/2-way body	●	●
Multi-port body	●	-
Body materials		
ABS	●	-
PP-H	●	●
PVC-C	●	-
PVC-U	●	●
PVDF	●	-
Conformities		
EAC	●	-

Technical data depends on the respective configuration - see datasheet or Product Selection Tool

GEMÜ 717
Manually operated ball valve

The GEMÜ 717 2/2 or 3/2-way plastic ball valve has an ergonomically designed hand lever and is manually operated. The seat seal is made from PTFE and the O-ring seals can be made from either EPDM or FKM.

Features

- High flow rate
- Low weight
- Choice of various body materials and connection types
- Union nut with integrated spin-lock
- 2/2 and 3/2-way versions available
- Optionally available with control ball

also as control valve

EAC

Technical specifications

Media temperature :	-20 to 100 °C
Ambient temperature:	-10 to 50 °C
Operating pressure :	0 to 16 bar
Nominal sizes:	DN 10 to 100
Body configurations:	2/2-way body | Multi-port body
Connection types:	Flange | Solvent cement socket | Spigot | Threaded connection | Union end
Connection standards:	ANSI | BS | DIN | EN | ISO | JIS | NPT
Body materials:	ABS | PP-H, grey | PVC-C, chlorinated | PVC-U, grey | PVDF
Seal materials:	EPDM | FKM
Conformities:	EAC

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GW-717

GEMÜ S717
Manually operated ball valve

GEMÜ S717 is a 2/2-way plastic ball valve available in sizes DN 10 to 100. It is equipped with a plastic manual actuator. The seat seal is made from PTFE and the O-ring seals can be made from either EPDM or FKM.

The product is designed for use in piping. It controls a flowing medium by manual operation.

Features

- Simple installation
- Durable
- Grip can be used as a regulating key

Technical specifications

Media temperature :	0 to 60 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	0 to 16 bar
Nominal sizes:	DN 10 to 100
Body configurations:	2/2-way body
Connection types:	Flange I Solvent cement socket I Spigot I Threaded connection I Union end
Connection standards:	ASTM I BS I DIN I NPT
Body materials:	PP-H, grey I PVC-U, grey
Seal materials:	EPDM I FKM

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GW-S717

Check valves and strainers

Check valves are used if you want to ensure that the medium flows in only one direction in a system. This involves the closing element being blocked in one direction using a spring or gravity, and unblocked by the volumetric flow in the other direction. Two designs can basically be distinguished here – check valves with angle seat globe valve bodies and standard check valves.

Check valves and strainers

Overview

GEMÜ type	RSK	ZRSK	560	N560
				
Design	Check valve	Check valve	Check valve	Check valve
Media temperature	-10 to 120 °C	-40 to 200 °C	-10 to 180 °C	5 to 80 °C
Operating pressure	1 to 10 bar	1 to 16 bar	0,2 to 25 bar	0 to 16 bar
Nominal sizes	DN 32 to 600	DN 32 to 600	DN 6 to 50	DN 10 to 100
Body materials				
1.0460	-	●	-	-
1.0619	-	-	-	-
1.4408	-	●	●	-
1.4435	-	-	●	-
1.4435 (BN2)	-	-	●	-
1.4571	-	●	-	-
2.0975	-	●	-	-
PP	●	-	-	-
PP-H	-	-	-	●
PTFE	-	-	-	-
PVC-U	●	-	-	●
PVDF	●	-	-	-
Conformities				
ATEX	-	●	●	●
DVGW Drinking water	-	-	-	-
EAC	●	●	●	-
FDA	●	●	●	-
KTW	-	-	-	-
WRAS	-	-	-	-

GEMÜ type	CV	R90	R91
			
Design	Check valve		
Media temperature	0 to 130 °C	-196 to 400 °C	-200 to 300 °C
Operating pressure	0 to 6 bar	0 to 50 bar	0 to 16 bar
Nominal sizes	DN 4 to 20	DN 15 to 300	DN 50 to 600
Body materials			
1.0460	-	-	-
1.0619	-	●	●
1.4408	-	-	-
1.4435	-	-	-
1.4435 (BN2)	-	-	-
1.4571	-	-	-
2.0975	-	-	-
PP	-	-	-
PP-H	-	-	-
PTFE	●	-	-
PVC-U	-	-	-
PVDF	-	-	-
Conformities			
ATEX	-	●	-
DVGW Drinking water	-	●	-
EAC	●	●	●
FDA	-	●	-
KTW	-	●	-
WRAS	-	-	●

GEMÜ RSK
Plastic check valve

GEMÜ RSK is a plastic check valve with integrated flange seal. The valve body, disc and seal are available in various materials.

The GEMÜ RSK is clamped between two flanges during installation. The centring is based on the outside diameter of the housing

Features

- Weight and space-saving construction
- Short length
- Simple construction
- Option with return spring
- Bubble tight sealing, in accordance with EN 12266-1/P12, leak rate A

Technical specifications

Media temperature :	-10 to 120 °C
Ambient temperature:	0 to 60 °C
Operating pressure :	1 to 10 bar
Nominal sizes:	DN 32 to 600
Connection types:	Flange
Connection standards:	ANSI | DIN | EN | ISO
Body materials:	PP | PVC-U, grey | PVDF
Seal materials:	FKM | NBR | PTFE
Disc materials:	PP-H | PVC-U | PVDF
Conformities:	EAC | FDA

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GW-RSK

GEMÜ ZRSK
Metal check valve

GEMÜ ZRSK is a metal check valve with integrated flange seal. The valve body, disc and seal are available in various materials.

The GEMÜ ZRSK is clamped between two flanges during installation. The centring is based on the outside diameter of the body.

Features

- Weight and space-saving construction
- Short length
- Simple construction
- Option with return spring
- Bubble tight sealing in accordance with EN 12266-1/P12, leakage rate A and G

Technical specifications

Media temperature :	-40 to 200 °C
Ambient temperature:	-40 to 95 °C
Operating pressure :	1 to 16 bar
Nominal sizes:	DN 32 to 600
Connection types:	Flange
Connection standards:	ANSI | DIN | EN | ISO
Body materials:	1.0460, galvanized cast steel material | 1.4408, investment casting material | 1.4571, forged material | 2.0975, cast bronze material
Seal materials:	EPDM | FKM | NBR | PTFE
Disc materials:	1.0460, galvanized cast steel material | 1.4408, investment casting material | 1.4571, forged material
Conformities:	ATEX | EAC | FDA

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GW-ZRSK

GEMÜ 560
Check valve, angle seat design

The GEMÜ 560 check valve comprises an angle seat valve body in stainless steel. The valve has either a PTFE or PFA seat for tight shut off. The valve is available with various connection types. The valve is available with various connection types.

Features

- High flow rates due to angle seat design
- Seven different connection codes for worldwide use

Technical specifications

Media temperature :	-10 to 180 °C
Ambient temperature:	-10 to 60 °C
Operating pressure :	0,2 to 25 bar
Nominal sizes:	DN 6 to 50
Connection types:	Clamp I Flange I Spigot I Threaded connection
Connection standards:	ANSI I ASME I DIN I EN I ISO I SMS
Body materials:	1.4408, investment casting material I 1.4435 (BN2), forged material I 1.4435, investment casting material
Seal materials:	PFA I PTFE
Conformities:	ATEX I EAC I FDA

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GW-560

GEMÜ N560
Check valve

The GEMÜ N560 check valve comprises an angle seat globe valve body made of plastic (either PVC-U or PP-H). The sealing elements are manufactured from EPDM and FPM.

Features

- Easy to service
- High flow rates due to angle seat design
- Low weight

Technical specifications

Media temperature :	5 to 80 °C
Ambient temperature:	5 to 50 °C
Operating pressure :	0 to 16 bar
Nominal sizes:	DN 10 to 100
Connection types:	Flange I Solvent cement socket I Spigot I Threaded connection
Connection standards:	ANSI I DIN I EN
Body materials:	PP-H, natural I PVC-U
Seal materials:	EPDM I FKM
Conformities:	ATEX

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GW-N560

GEMÜ CV
Check valve

The GEMÜ CV metal-free check valve comprises a PTFE body. All functional parts are also made of PTFE. PFA, PVDF and CPFA materials are available for the union nuts in the flare connections. Sealing is O-ring-free.

Features

- Long life seal characteristics
- O-ring free seal system
- Compact design
- Low opening pressure
- Special versions available for direct integration into a block valve

Technical specifications

Media temperature :	0 to 130 °C
Ambient temperature:	0 to 100 °C
Operating pressure :	0 to 6 bar
Nominal sizes:	DN 4 to 20
Connection types:	Flare
Body materials:	PTFE
Seal materials:	PTFE
Conformities:	EAC

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GW-CV

GEMÜ R90
Metal disco check valve

The GEMÜ R90 is a metal disco check valve with flange connection and standardized length to DIN EN 558. The valve body, disc and seal are available in various materials. In the version with metallic seal, the GEMÜ R90 valve can be used at high temperatures up to 400 °C.

Features

- Suitable for low and high temperatures
- Standardized length to DIN EN 558, series 49
- Available as option free of oil and grease
- A special disc guide prevents the disc from tilting and the occurrence of strong flutter
- Bubble tight sealing in accordance with EN 12266-1/P12, leakage rate A and G

Technical specifications

Media temperature :	-196 to 400 °C
Ambient temperature:	-20 to 95 °C
Operating pressure :	0 to 50 bar
Nominal sizes:	DN 15 to 300
Connection types:	Flange
Connection standards:	ANSI | ASME | EN
Body materials:	1.0619, galvanized cast steel material | 1.4408, investment casting material
Seal materials:	EPDM | FKM | NBR | PTFE
Disc materials:	1.0619, galvanized cast steel material | 1.4408, investment casting material
Disc/spring cross materials:	1.4408, investment casting material | 1.4469, duplex cast steel material
Spring materials:	1.4571, spring steel | 2.4610
Conformities:	ATEX | DVGW Drinking water | EAC | FDA | KTW

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GW-R90

GEMÜ R91
Metal dual plate check valve

The GEMÜ R91 is a metal dual plate check valve with flange connection and standardized length to DIN EN 558-1. The valve body, plates and seals are available in various materials. In the version with metallic seal, the GEMÜ R91 valve can be used at high temperatures up to 300 °C.

Features

- Suitable for low and high temperatures
- Standardized length to DIN EN 558-1, series 16
- Available as option free of oil and grease
- Bubble tight sealing in accordance with EN 12266-1/P12, leakage rate A and G

Technical specifications

Media temperature :	-200 to 300 °C
Ambient temperature:	-20 to 95 °C
Operating pressure :	0 to 16 bar
Nominal sizes:	DN 50 to 600
Connection types:	Flange
Connection standards:	ANSI I ASME I EN
Body materials:	1.0619, galvanized cast steel material I 1.4408, investment casting material I EN-GJS-400-15
Seal materials:	EPDM I FKM I NBR
Disc materials:	1.4408 I 2.0975, bronze casting material I EN-GJS-400-15
Spring materials:	1.4571, spring steel
Conformities:	EAC I WRAS
Plate material:	1.4408, investment casting material I 1.4469, duplex cast steel material I EN-GJS-400-15, SG iron material

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GW-R91

MENA
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