

and control systems



GEMÜ Group

The GEMÜ Group develops and manufactures valves, measurement and control systems for liquids, vapours and gases. GEMÜ is a global market leader when it comes to solutions for sterile applications.

Since 1964, this globally focused, independent family-owned enterprise has established itself in important industrial sectors thanks to its innovative products and customized solutions for process media control. In 2011, Gert Müller took over as Managing Partner together with his cousin Stephan Müller, becoming the second generation to run the company.

2400+

GEMÜ TEAM

50+



COUNTRIESSubsidiaries and long-term partners



With our wide product range, we offer solutions for the most varied industrial sectors. To be closer to our customers, we operate in three strategic business units:







3

Diaphragm valves

Features

- Very good cleanability (minimal deadleg)
- · Hermetic separation of the medium from the actuator
- · Optional flow direction

Typical working media

- · Inert and corrosive media
- Liquids: Water, pharmaceutical quality water, cleaning media
- · Hygienic and aseptic media
- · Steam: Ultra pure steam, saturated steam, black steam
- · Slurries and chemicals: Slurries, powder and dusts
- Ultra pure to heavily contaminated abrasive media

Technical specifications

- Nominal sizes
 - Plastic: DN 4 to 100
 - Metal: DN 4 to 300
- · Media temperature
 - Plastic: Up to 150 °C
 - Metal: Up to 100 $^{\circ}\text{C}$
- Operating pressure: Up to 10 bar







Actuators

- Manual
- Pneumatic
- Motorized

Body configurations

- Full bore design
- Weir-type design
 - 2/2-way bodies
 - Welding configurations
 - T bodies
 - i-bodies
 - Multi-port bodies

Body materials

- · Plastic (ABS, PFA, PP, PVC, PVDF)
- · Metal (brass, cast iron, SG iron)
- Stainless steel (1.4408, 1.4435, 1.4539)
- · Also with plastic lining

Seal materials

- · One-piece diaphragm: CR, EPDM, FKM, IIR, NBR, NR
- Two-piece diaphragm: PTFE/EPDM, PTFE/FKM
- · Three-piece diaphragm: PTFE/PVDF/EPDM





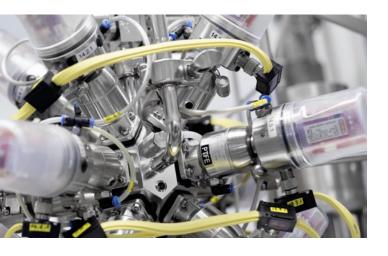
Multi-port valve blocks

Features

- · Customized, flexible design that is optimized for draining
- GMP-compliant design
- Compact design and consequently greatly reduced deadlegs
- · Increased product reliability
- Reduced and simple validation by getting rid of internal weld seams and combining in a single valve body

Typical working media

- Liquids: Water, pharmaceutical quality water, cleaning media
- · Hygienic and aseptic media
- Steam: Ultra pure steam, saturated steam, black steam
- · Inert and corrosive media: Acids, alkalis and chemicals
- · Clean, contaminated and abrasive media, slurries



Technical specifications

· Nominal sizes: DN 4 to 150

· Media temperature: Up to 100 °C

· Operating pressure: Up to 10 bar

Actuators

- Manual
- Pneumatic
- Motorized

Body configurations

- Customized
- · Can be extended in modular form

Body materials

- Stainless steel (1.4435, 1.4539)
- Plastic (PFA, PTFE, PP-H, PVC-U, PVDF)

Seal materials

- · One-piece diaphragm: CR, EPDM, FKM, IIR, NBR, NR
- · Two-piece diaphragm: PTFE/EPDM, PTFE/FKM
- · Three-piece diaphragm: PTFE/PVDF/EPDM
- PD: PTFE, 1.4435/FKM/PTFE



Tank valves

Features

- · Versions for tank bottom, tank wall or tank cover available
- · Customized design possible
- Simple welding into the tank bottom possible via integrated welding neck
- · Minimal deadlegs and optimized draining capabilities
- · CIP/SIP capable

Technical specifications

· Nominal sizes: DN 4 to 150

· Media temperature: Up to 100 °C

· Operating pressure: Up to 10 bar

Actuators

- Manual
- Pneumatic

Body materials

• Stainless steel (1.4435, 1.4539)



Sampling systems

Features

- · Suitable for contamination-free sampling
- Special materials and customized test requirements possible
- Compact construction for installation in tight spaces
- · Minimal deadlegs and optimized draining capabilities
- · CIP/SIP capable

Technical specifications

· Nominal sizes: DN 4 to 15

Media temperature: Up to 100 °C
Operating pressure: Up to 10 bar

Actuators

- Manual
- Pneumatic

Body materials

Stainless steel (1.4435, 1.4539)



Single-use solutions

Feature

· Hermetic separation of the media wetted area

Production & quality management

- Cleanroom manufacturing and assembly in cleanroom class 8 acc. to EN ISO 14644-1 with access and contamination control
- · Manufactured in accordance with GMP
- · FDA-registered manufacturing site
- TSE/BSE compliant
- · Transport validation as per ISTA

Media wetted materials

- · USP & EP compliant purity
- ISO 10993 compatibility
- · Use of FDA-compliant plastics
- Sterilization acc. to ISO 11137
- Radiation sterilization by X-ray or gamma irradiation (certified radiation dosage > 25 kGy)

Typical working media

- Acids
- Alkalis
- · Buffer media
- · Saline solutions



Single-use valve designs

- · Diaphragm valves
 - Nominal sizes: 1/4" (DN 8) to 1" (DN 25)
 - Operating pressure: Up to 4.9 bar
 - Media temperature: 5 to 40 °C
 - Body configurations: 2/2-way bodies, angle valve bodies, T bodies, customized multi-port valve blocks
 - Actuator versions: Manual, pneumatic, motorized
- Pinch valves
 - Nominal sizes: 1/4" (DN 8) to 1" (DN 25)
 - Operating pressure: Up to 6 bar
 - Actuator versions: Pneumatic, motorized

Single-use components

- Mixers
- · Distribution plates
- Fittings
- · Sensor blocks
- · Customized components

Single-use flowpath

- Customized assembly
- · Individually configurable



Diaphragm globe valves

Features

- CIP/SIP capable and autoclavable (only stainless steel versions)
- · 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

Technical specifications

· Nominal sizes:

Plastic: DN 4 to 25
 Metal: DN 8 to 65

Media temperature:

Plastic: Up to 200 °C
 Metal: Up to 160 °C

Operating pressure: Up to 10 bar



Actuators

- Manual
- Pneumatic
- Motorized

Body configurations

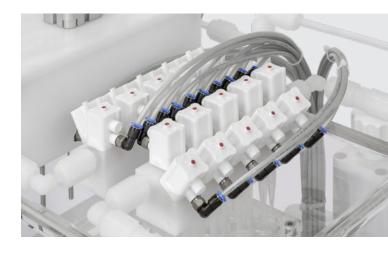
- 2/2-way bodies
- · Angle valve bodies
- · Multi-port bodies

Body materials

- Stainless steel (1.4435)
- Plastic (PP, PVDF, PVC, PTFE)

Seal materials

- PTFE
- 1.4435/FKM/PTFE



Globe valves

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

Technical specifications

Nominal sizes: DN 6 to 150

Media temperature: Up to 185 °C*
 Operating pressure: Up to 40 bar



^{*}higher temperatures possible as an option

Actuators

- Manual
- Pneumatic
- Motorized

Body configurations

- Straight seat bodies
- · Angle seat bodies
- 3/2-way bodies
- · Angle valve bodies

Body materials

- Stainless steel (1.4408, 1.4435)
- Metal (cast bronze, SG iron)
- · Plastic (PVC-U, PVDF)
- · In addition: Wide choice of gland packings



Ball valves

Features

- · High flow rates
- · High operating pressures
- · High temperatures

Typical working media

- · Liquids: Water, glycol, cooling lubricant
- · Gases: Air, compressed air
- · Pure and non-crystallizing media

Technical specifications

- · Nominal sizes: DN 8 to 150
- Media temperature: Up to 220 °C
- Operating pressure: Up to 137 bar



Actuators

- Manual
- Pneumatic
- Motorized

Body configurations

- 2/2-way bodies
- 3/2-way bodies

Ball options

- · Full and reduced bore
- T- or L-bores

Body materials

- Stainless steel (1.4404, 1.4408, 1.4435)
- Plastic (ABS, PP, PVC, PVDF)

Seal material

PTFE



Butterfly valves

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/coolants
- Gases: Steam, air, nitrogen, natural gas, noble gases, vapour
- · Solids: Bulk materials

Technical specifications

Nominal sizes: DN 15 to 1600
Media temperature: Up to 230 °C
Operating pressure: Up to 40 bar



Actuators

- Manual
- Pneumatic
- Motorized

Body configurations

- Wafer
- Luq
- U section

Body materials

- Metal (cast iron, SG iron, cast steel, brass, aluminium, stainless steel)
- Plastic (PVC-U, PP)
- · In addition: Wide choice of disc materials

Seal materials

- · Soft seated: CR, CSM, ECO, EPDM, FKM, NBR, SBR, silicone
- PTFE seal: PTFE/EPDM, PTFE/FKM, PTFE/silicone, PTFE/ EPDM, PTFE/FKM, PTFE/silicone



Process solenoid valves

Features

- · High cycle duties possible
- · Corrosion-resistant
- · Ideal dosing valve for small to very small quantities
- · Preferred flow direction over the seat
- Also suitable for vacuum applications

Typical working media

- · Inert and corrosive media
- · Liquids and gases

Technical specifications

Nominal sizes: DN 2 to 50

Media temperature: Up to 150 °C

· Operating pressure: Up to 20 bar

Body configurations

· 2/2-way bodies

Body materials

- Plastic (PVC, PVDF, PP)
- Metal (brass)
- Stainless steel (1.4404, 1.4408)



Pressure control valves

Features

- · All media wetted parts are made of highly resistant plastic
- · No auxiliary power required
- Low maintenance
- · Can be installed irrespective of location

Technical specifications

Nominal sizes: DN 10 to 100
Media temperature: Up to 100 °C

· Operating pressure: Up to 10 bar

Body configurations

- 2/2-way bodies
- T bodies

Body materials

· Plastic (PP, PVC, PVDF)



Check valves and strainers

Features

- · Universal components for pipeline construction
- · Simple assembly and maintenance
- · Wide range of functional principles and materials

Technical specifications

- · Nominal sizes: DN 6 to 600
- Media temperature: Up to 400 °C
- · Operating pressure: Up to 40 bar

Designs

- · Check valves made of metal and plastic
- · Angle seat check valve made of metal
- · Strainer made of plastic

Body materials

- · Metal (stainless steel, galvanized cast steel, SG iron)
- Plastic (PP, PVC, PVDF, PTFE)



Connection technology

Features

- · Over 1000 different fittings
- · High-quality tubes
- Produced under cleanroom conditions in compliance with DIN 16901-140
- · High reliability

Technical specifications

· Nominal sizes: DN 4 to 32

Media temperature: Up to 250 °C
Operating pressure: Up to 6 bar

Materials

Tube/fitting (PFA)

• Union nut (PFA, PTFE, PVDF)



Positioners and process controllers

Features

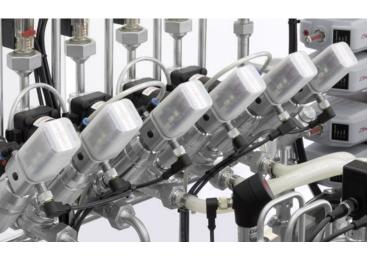
- Precise control of temperature, pressure, flow and level possible
- Versions for pneumatic quarter turn or linear actuators as well as motorized actuators
- · Direct or remote mounting
- · Versions with fieldbus capability

Technical specifications

- · Flow rate: 15 to 172 NI/min
- · Linear measuring range: up to 75 mm
- · Radial measuring range: up to 90°
- Communication modes: DeviceNet, Profibus, ProfiNet, BLE, HART

Designs

- · Electro-pneumatic positioner
- Electro-pneumatic positioner with integrated process controller
- Controller



For pneumatic actuators, our positioners and process controllers are fitted ex works, tested and delivered as an entire system.

Not only can you obtain all components from a single source, you also reduce the effort required for logistics and installation of the system on site, as well as for documentation.

For motorized actuators, the controller is mostly fully integrated. These actuators are an optimal alternative to control valves in sterile environments or when considering service life.

If required, the positioner in question can also be commissioned at the place of use by GEMÜ service engineers.



Electrical position indicators and combi switchboxes

Features

- For monitoring linear and guarter turn valves
- Monitoring of set limiting values and/or continuous valve position feedback
- Manual or automatic end position programming during initialization
- · Combi switchboxes with integrated pilot valve
- ATEX versions
- Intelligent reliable recording of end positions via potentiometer

Technical specifications

- · Linear measuring range: Up to 75 mm
- · Radial measuring range: Up to 90°
- · Communication modes: AS-Interface, DeviceNet, IO-Link

Designs

- · 2-wire proximity switch (NAMUR)
- · Microswitch
- · 3-wire proximity switch



Pilot valves

Features

- · Robust design
- · Coil easy to replace
- · Integrated LEDs as an option

Technical specifications

- Nominal sizes: DN 2 to 7
- Media temperature: Up to 60 °C
- Operating pressure: Up to 10 bar

Designs

- · Single valves
- · Valve batteries
- · Valve manifolds



Measurement devices

Features

- · High accuracy
- · Simple operation
- · Versions with fieldbus capability

Designs

- · Variable area flowmeters
- · Electrical flowmeters
- Temperature measurement devices
- · Pressure measurement devices

Measuring ranges

Media temperature: -40 to 150 °C
Operating pressure: 0 to 160 bar
Liquids: 0.1 bis 1,150,000 l/h

· Gases: 0.02 to 450 Nm3/h



GEMÜ Systems

As specialists in valve design, we also provide you with customized system solutions. From the idea stage to development and manufacture – the entire process takes place under one roof. This enables you to have system solutions tailored to your specific needs.

All from a single source

- Subassemblies, small systems and partial sections
- · Connection solutions on a case by case basis
- Sample and low-volume production
- · Process optimization and special solutions
- Test rigs and prototype construction



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