# Plastic diaphragm globe valves GEMÜ C50/C51/C57 iComLine

## Areas of application

- Microelectronics and semiconductor industries
- Chemical engineering
- Industrial water treatment
- Medical industry
- Power generation and environmental engineering
- Pharmaceutical, biotechnology and cosmetics industries
- Foodstuffs and beverages

## Features

- Low space requirement due to compact design
- Globe valve design with long service life
- Minimal contamination due to cleanroom manufacturing
- Minimal deadleg design
- Available with 2/2-way body and as a multi-port valve block system

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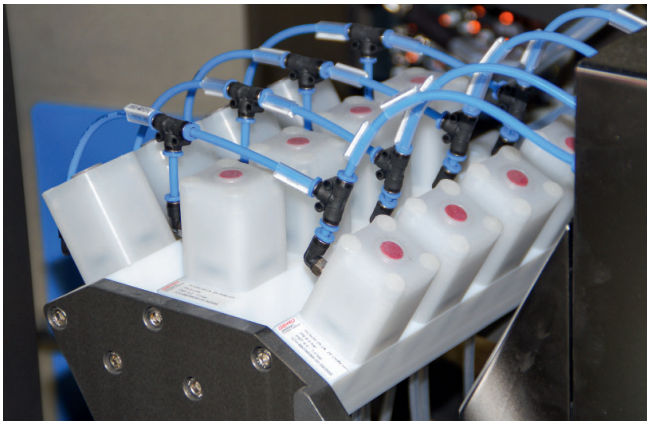
# Application examples



**Chemical supply for ultra pure areas of application**

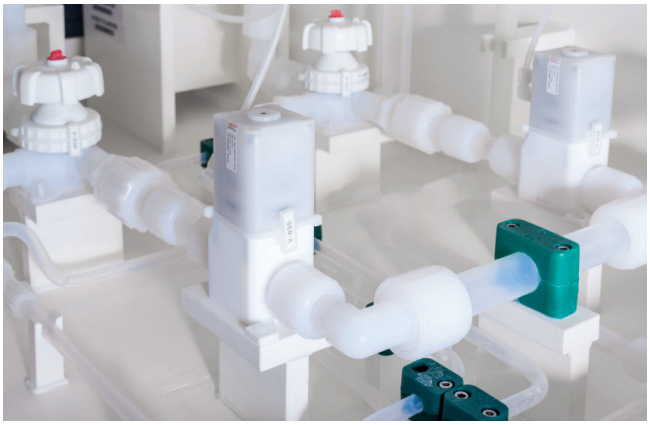
Used for

- Chemical supply systems for wet process applications
- Chemical supply systems for LED and microchip manufacture
- Chemical dosing/filling

**Wet processes in microchip manufacture**

Used for

- Wafer cleaning
- Etching/lithography in the manufacture of micro-electronic circuits
- Electroplating plants



**Slurry systems in the microelectronics and semiconductor industries**

Used for

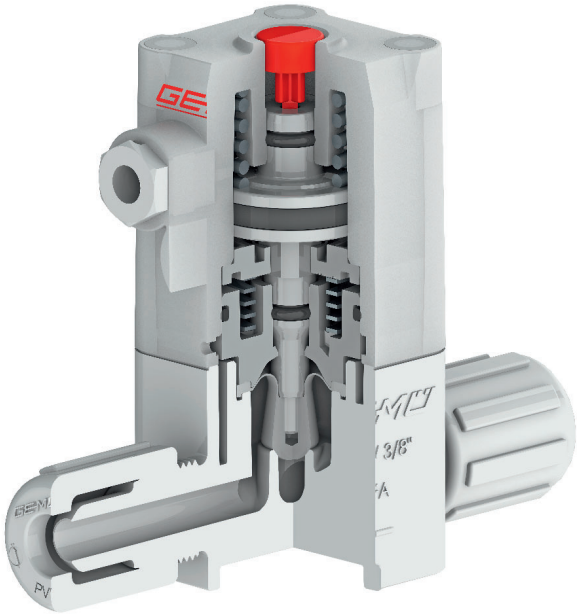
- Sawing silicon wafers
- Mixed systems/recycling polishing agents
- Producing photovoltaic systems

**Energy storage/e-mobility/clean energy**

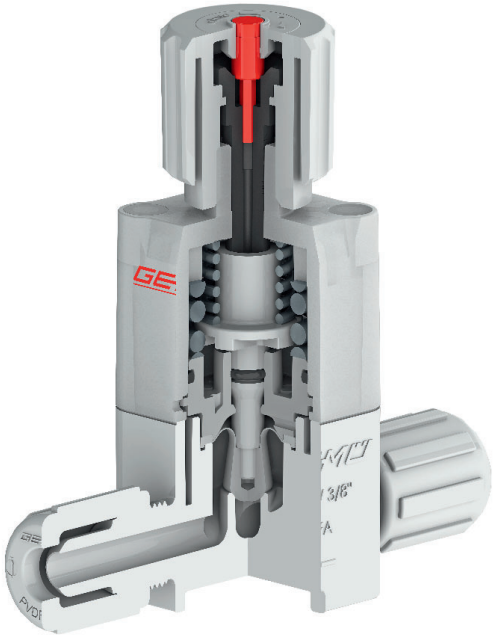
Used for

- Electrolyte filling in battery production
- Supply/filling systems for dosing corrosive media
- Producing photovoltaic systems

# Product highlights



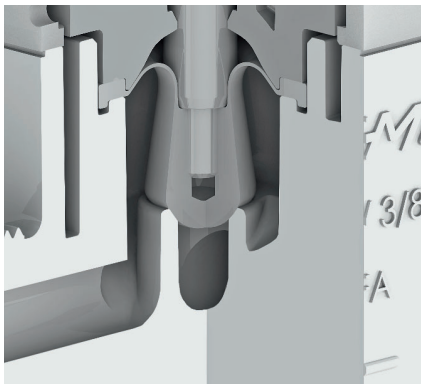
GEMÜ C50



GEMÜ C57

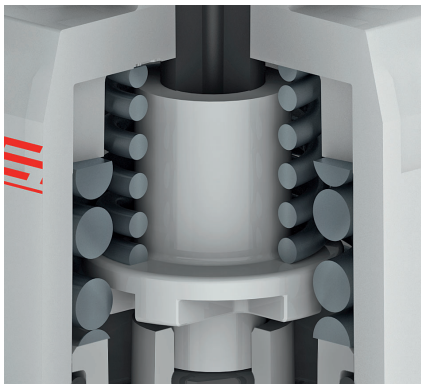
## Globe valve design – compact design

- Globe valve design enables small footprint
- PTFE diaphragm (no other material/diaphragm back)
- Long service life – expected maximum cycles: Five million switching cycles
- Very suitable for control applications
- Very suitable for corrosive media
- Particularly suitable for use as dosing or filling valve
- Cost reduction possible due to intermediate seat sizes



## Reliable tightness due to pre-tensioned spring

- Innovative solution offers extended areas of use
- The pre-tensioned spring presses the diaphragm against the body, counteracting settling effects
- External leak tightness guaranteed, even with temperature fluctuations
- Long service life, even under extreme conditions of use



# System solutions

## Configuration examples

### Customized multi-port valve block systems

- Compact design
- Flexible use
- Clear investment advantages due to reduced TOC (total cost of ownership)

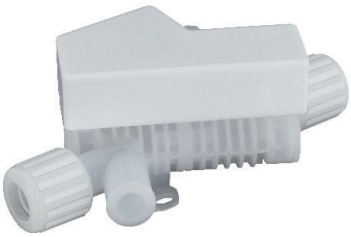
### Different valve body materials and connection options

- Depending on customer wishes/ specifications
- Depending on use of media/ operating conditions
- Compact solution produced by machining a single block of material

### Installation of electrical accessories

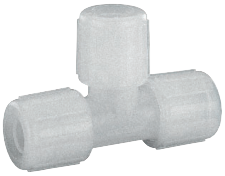
- Depending on customer request/ system solution
- Installation of electrical position indicators
- Adaptation of positioners and process controllers (also available with remote mounting)

## System components



GEMÜ C38 SonicLine

GEMÜ C32 HydraLine



GEMÜ FlareStar

GEMÜ TubeStar

### Integration of sensor system and subassemblies in multi-port valve blocks

- Pressure and temperature sensors
- Sensor system for determining the conductivity
- pH value measurement sensors
- Check valves

Multi-port valve block with integrated sensor unit and integrated temperature sensor

# Overview of options

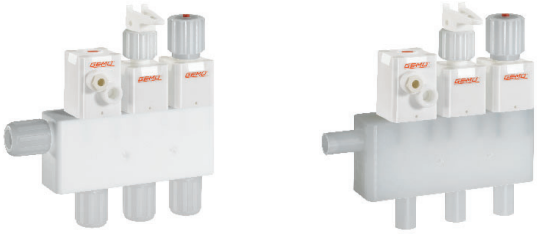
## Operator types and operator sizes

## Technical specifications

- Actuation types:
  Pneumatic, manual (handwheel),
  manual (hand lever, quarter turn)
- Nominal sizes*:
  ¼" to 1 ¼"
- Connections
  Flare, Pillar® and PrimeLock® connection
- Body materials*
  PTFE, PFA
- Media temperature*
  -5 to 180 °C
- Operating pressure
  0 to 6 bar

* depending on version and/or operating parameters

## Body materials and connections



- Connections: Flare, Pillar® and PrimeLock® connection, female thread, butt weld spigot
- Body materials: PTFE, PVDF, PP, PVC

## Accessories

- Various electrical position indicators, positioners and process controllers can be fitted

## Modular valve block solution

- Adapted special connections, retrofit
- Subdivided subassembly, filter housing attachment/ housing walls, sensor integration
- Modular system, flexible and extendable
- Cost optimization, same subassemblies

# Permanently controlled quality

**Purity, quality, safety**
To guarantee the highest purity, all high purity products are manufactured, cleaned, assembled and packed under cleanroom conditions. GEMÜ products are subject to continuous quality management. To this end, all processes are continuously monitored. The internal tests are also supplemented by testing at external testing institutes.

### Raw material

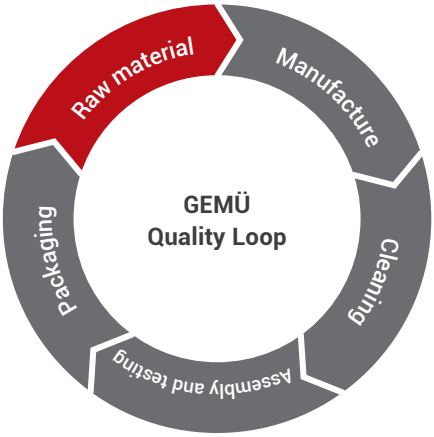
Preliminary test and reference sampling

### Manufacture

CNC manufacture and 100% testing of plastic block bodies

### Cleaning

Multi-stage cleaning




### Packaging

Double packaging and identification for complete traceability

### Assembly and testing

Assembly in the cleanroom and 100% testing (tightness etc.)

## GEMÜ Quality Loop

- Use of specified/controlled raw materials, continuous incoming inspection
- Reference sampling for traceability
- SPC – statistic process control
- Continuous further development for staff
- Voluntary supervision
- Customer audits
- Continuous improvement process
- Certified in accordance with ISO 9001:2008

# Areas of application

**Semiconductor and microchip industries and photovoltaic industry**

- Chemical supply
- Wet process equipment
- UHP and DI water treatment
- DI water supply systems
- Filling of chemicals
- Cooling water supply
- Etching and coating processes
- Cleaning processes

**Analytical and medical equipment and foodstuff industry**

- Dosing of protection solutions
- Ultra pure water dosing
- Filling and dosing of chemicals
- Aroma dosing

**LED and OLED production**

- Dosing and filling of chemicals
- Use as a drain valve and for cleanly separating media


**Battery technology and for energy storage systems**

- Precise dosing of corrosive media
- Electrolyte filling in the manufacture of batteries
- Coating suspension manufacture, slurry mixing process
- Coating of the anode and cathode films with slurry

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