



## Analyzing and topping up process media

### Process description

During the production process, a silicon wafer passes through multiple chemical baths. These baths contain mixtures of liquid media, whose concentration and temperature must always be kept at a consistent level. This requires continuous monitoring and analysis that is implemented with measuring valves and via a sampling process.

State-of-the-art PC-controlled analysis and automation systems enable real-time monitoring and precise topping up of process fluids, galvanic electrolytes and cleaning baths. The systems are located in a cleanroom and play a crucial role in the production of microchips.

### The task

During the production process for a microchip, the concentration of the chemicals used is reduced. In order to counteract the decrease in concentration, the necessary components are fed to the medium again, i.e. it is topped up. The GEMÜ valve handles this recirculation. A valve is used for each medium mixture or each basin.

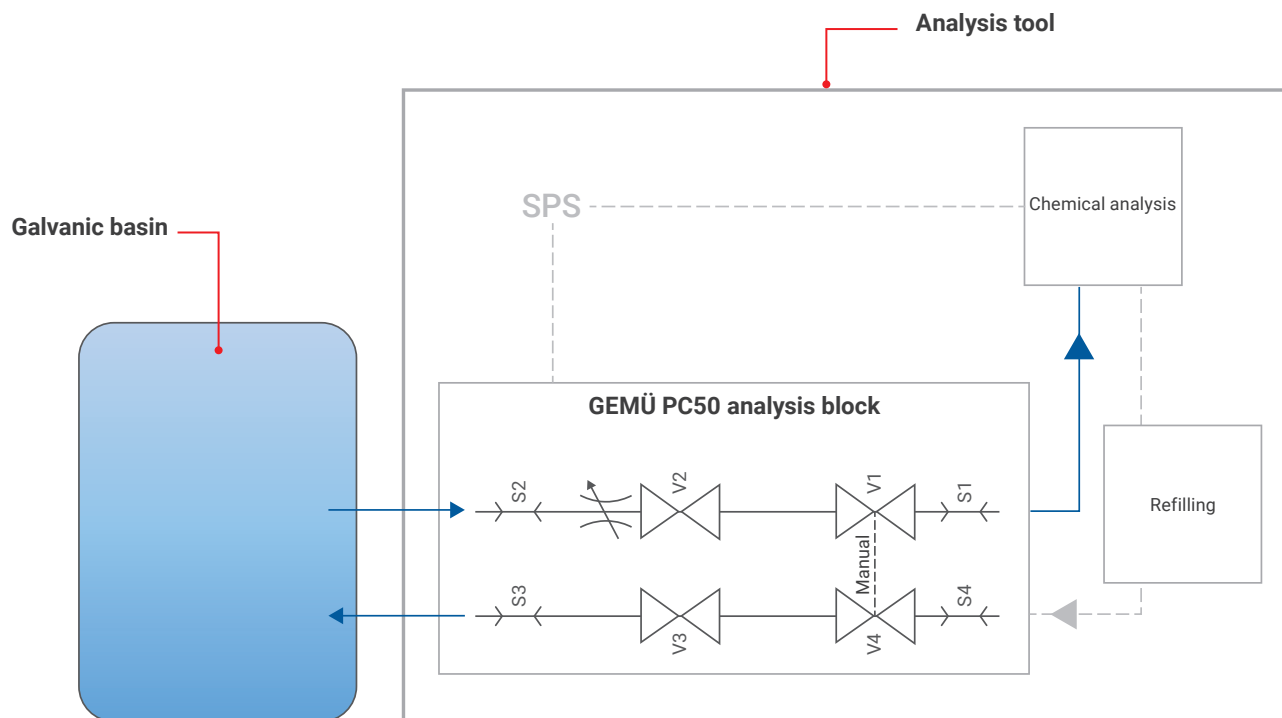
### Key process data

- Working medium: Medium mixture 3 bar
- Flow: 80–200 ml/min
- Body material: PVDF

### Other special features:

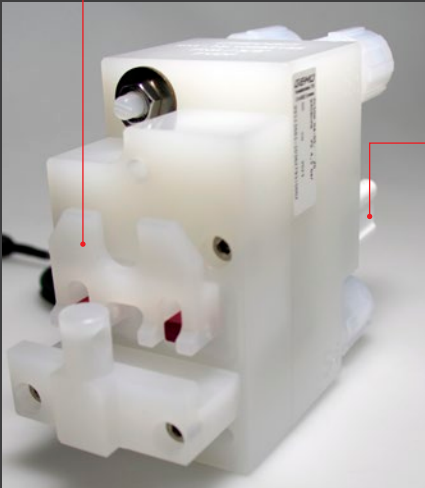
- 3 NC and 2 manual valves, integrated
- 2 manual valves with 1 lockable lever

## Diagrammatic process visualization




## Customized GEMÜ solution

### GEMÜ PC50 valve block solution with safety circuit



Single-lever safety circuit prevents the system from stopping inadvertently

GEMÜ C50 iComLine with integrated GEMÜ C12A electrical position indicator



**Advantages at a glance**

- Customized engineering  
Customized solutions in close collaboration with customers
- Fully-integrated system solution
- Increased process reliability
- Space savings thanks to compact design
- Short installation time, simple operation
- Integrated needle valve
- Integrated throttle valve