

# GEMÜ *BioStar*® Sampling System

for liquids and pure steam



## Fully automatic aseptic sampling system for liquids and pure steam

GEMÜ has developed a completely innovative system for sampling liquids (e.g. WFI, AP water) and pure steam, based on M-block diaphragm valve technology. The sampling system cooled with compressed air allows a variably definable sampling amount thanks to the calibrated block volume. A second multi-port valve with autoclave capability and integrated GL45 connection thread for standard laboratory bottles is connected to the actual sampling block. The connection is via an aseptic quick-action coupling. The sterilisation time and sampling amount can be set individually via the touchscreen of the PLC, thereby guaranteeing fully automatic and aseptic sampling.

### Benefits of the system:

- Sampling of pure steam and liquids with just one system
- Microbiologically flawless sampling via a closed system
- Automatic control of the sampling process
- Compact, mobile system including control and integrated operating unit
- Variable and reproducible setting facility for the required sampling amount
- Individual adjustment of the sterilisation time or rinsing time
- Reduction of potential scalding risks to the operating personnel
- Only compressed air (6 bar, max 20°C) and power (85-240 V, 50/60 Hz) are required on-site
- Integrated pressure relief valve
- Connection to existing pure steam / water pipe can be easily implemented

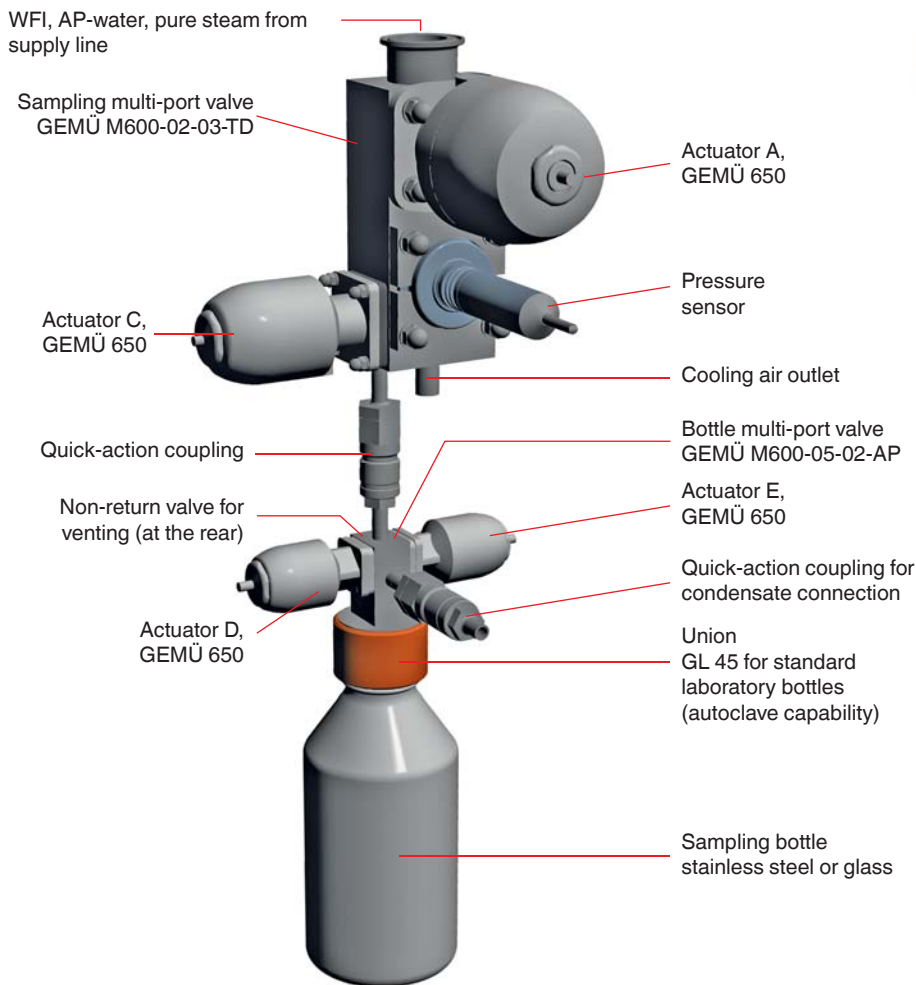


Option:  
Condensate outlet with  
temperature sensor

### Work steps for the sampling:

1. Sterilise the bottle multi-port valve (including bottle) in an autoclave\*
2. Connect the autoclaved bottle multi-port valve to the system via the quick-action coupling
3. Set the required parameters and start the sample extraction process via the touchscreen
4. Proceed automatically with the system sterilisation/rinsing, fill the desired amount and finish the sampling
5. The bottle multi-port valve including bottle can be easily disconnected and taken to the laboratory for sample analysis\*

\* The special layout of the components in the bottle multi-port valve prevents contamination, both during transport from the autoclave to the sampling system and to the laboratory after sampling.



## Technical data:

### 1. Multi-port sampling valve

- Actuators are GEMÜ 650 *BioStar*®
- Pressure sensor
- Butt weld spigots or clamp connections (DN 25 ISO)
- Surface finish: Available as per GEMÜ standard ( $R_a \leq 0,8 \mu\text{m}$ )
- Material: 1.4435 Stainless steel (including 3.1 Inspection certificate)
- Quick-action coupling for bottle multi-port valve
- Cooling air outlet
- Other versions and materials available on request

### 2. Bottle multi-port valve

- Actuators are GEMÜ 650 *BioStar*®
- Surface finish: Available as per GEMÜ standard ( $R_a \leq 0,8 \mu\text{m}$ )
- Non-return valve for venting (0.2 bar)
- Quick-action coupling for multi-port sampling valve and outlet
- Union for standard laboratory bottles (PBT, GL45)
- Complete autoclave capability

### 3. Sampling bottle

- Stainless steel bottle
  - Volume max. 1 litre
  - Material: 1.4404 Stainless steel (including Inspection certificate 3.1)
  - Operating pressure: -1 bar to max. 10 bar
- Glass bottle (Schott DURAN pressure plus)
  - Volume max. 1 litre
  - Material: Glass
  - Operating pressure: -1 bar to max. 1.5 bar

### 4. Control

- Control: Siemens Simatic S7-1200 with touchscreen
- Control cabinet dimensions approx. 300x165x400 mm (W x D x H)
- Electrical connection 85-240 V, 50/60 Hz
- Compressed air connection 10 mm
- Protection class IP 65
- Material: 304 Stainless steel



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# **GEMÜ**® VALVES, MEASUREMENT AND CONTROL SYSTEMS

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