

GEMÜ®

Protects staff and plant
GEMÜ 650TL for safe sampling

Areas of application **GEMÜ 650TL**

- *Pharmaceutical, Biotechnology and Cosmetics Industries*
- *Food and Beverage Industries*

Advantages

- *Additional pneumatic actuator for closing from a central control system*
- *Ergonomic handwheel*
- *Hermetic separation between medium and actuator*
- *CIP/SIP cleaning capability*
- *Optional flow direction and mounting position*



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High operational safety *in pharma water systems*

GEMÜ has developed a manual diaphragm valve with integrated pneumatic actuator for use in ring mains which can, if necessary, also be pneumatically actuated using an appropriate control panel. The new GEMÜ 650TL can be used, for example, to prevent manual sampling or removal.

In a pharmaceutical production process, it is necessary to sanitize and maintain aseptic conditions throughout the entire storage and distribution system of the pharma water system at regular intervals during periods of production downtime. Due to the low investment and operating costs involved, chemical sanitisation using ozone and thermal sanitisation using hot water or steam are the sanitisation measures most commonly used in industrial processes. To be able to check the quality of ultra-pure water, it is necessary to carry

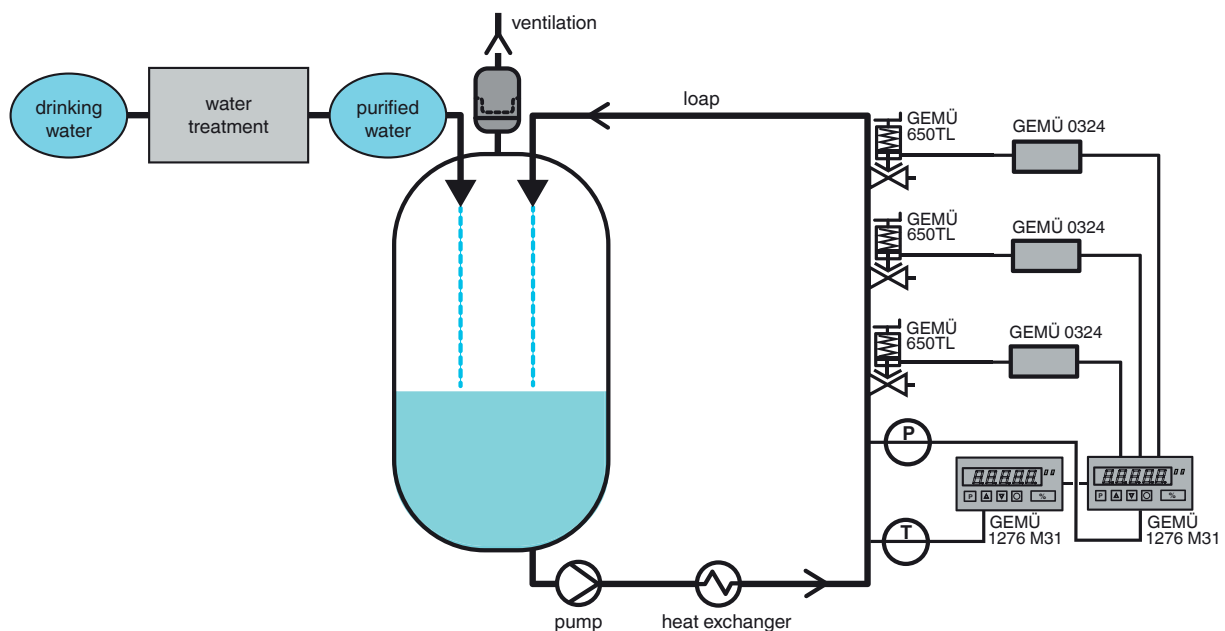
out regular checks at precisely defined sampling points (and on all POU*s) in the individual distributor loops. Pharmaceuticals standards require that quality-related measurement variables such as bacteria count, conductance and TOC* values be considered. This data is acquired from samples taken within each of the individual distributor loops using sampling valves.

GEMÜ solution protects employees and systems

After the system has been sanitized, for example using hot water, it may be the case that, at the time of the sampling, the temperature in the loop exceeds a specified limiting value and thus exposes the employees to an imminent risk of scalding. It is therefore necessary to use the central control panel to lock the sampling valve in order to prevent manual sampling. For this purpose, a temperature

sensor within the supply system detects the temperature that is transferred to a control panel (e.g. GEMÜ 1276) (see diagram). If the temperature lies above the specified limiting value, the sampling valve (GEMÜ 650TL) is closed or locked using a

system. In cases where there are quality-relevant deviations, the sampling points and the POU with the GEMÜ 650TL are locked using the central control panel. This allows a quality-critical removal to be prevented.



pilot valve (e.g. GEMÜ 334), and as a result, it can no longer be opened using the handwheel. Only once the temperature falls below the specified limiting value again is the sampling valve pneumatically actuated or unlocked, and the employee can safely open it using the handwheel in order to take a sample.

GEMÜ solution translates into quality assurance

In addition to high temperatures, specified quality parameters, such as conductance, TOC value or pressure may be exceeded or not reached. In larger systems, these values are constantly checked at appropriate measuring points within the supply

As soon as the values lie within the specified limits again, the sampling points and the POU can be released again by the control panel. This ensures that sampling or removals can be carried out safely.

***Explanations:** Sanitisation = Reduction in the bacteria count (as opposed to sterilisation, in which the micro-organisms are completely killed off)

TOC value = Total Organic Carbon (sum parameter for the total level of organically bound carbon in a sample)

POU = Point of Use

GEMÜ 650TL

• Valve design

This manual diaphragm valve has an additional pneumatic piston actuator. In order to be able to operate the valve via the handwheel, the actuator must be pressurized. Using this function any manual sampling or tapping can be centrally controlled as the valve can be locked by a central control system.

• Technical data

• Nominal sizes:

DN4 to DN25 *

• Connections:

Butt weld spigots, clamp connections, threaded connections

• Body materials:

1.4435 (investment casting, forged body or block material)

• Media temperature :

max. 150 °C *

• Operating pressure:

0 to 8 bar *

* depending on version and/or operating parameters

• Applications

- For use as a tapping valve in WFI loops
- Other applications where the prevention of manual tapping may be necessary

