

Automation inside

New pneumatic aseptic valves with integrated automation technology

Automation inside is the guiding principle behind the development of the GEMÜ 651 stainless steel diaphragm valve for the pharmaceutical industry. The new valve is a compact unit comprising stainless steel diaphragm valve, pneumatic piston actuator, valve actuation, position indicator and field bus connection (e.g. AS interface). Integral automation, compact design, easier and faster installation / commissioning as well as the design recommendations of



FDA and EHEDG in compliance with GMP are only some of the basic requirements this new product satisfies.

In the past users needed three products to establish a functional unit. This comprised of a valve, solenoid and switchbox, which had to be assembled using valve-specific mounting kits. GEMÜ now provides a complete solution with the type 651. This requires very little mechanical installation and is ready for operation within just a few minutes thanks to the innovative SpeedAP function. An analogue travel sensor continuously detects the valve position. The data is evaluated via a microprocessor. This ensures simple, fast and automated commissioning of the valve, e.g. after changing the diaphragm.

The GEMÜ 651 diaphragm valve is available as an "OPEN/CLOSE" valve or with integrated positioner as a control valve in the nominal sizes DN 4 – 25. The maximum permissible operating pressure is 10 bar with EPDM diaphragms and 6 bar with PTFE diaphragms. The maximum permissible operating temperature during sterilisation is 150°C. The valve is CIP/SIP capable. Its compact design makes it ideally suitable for use where space is at a premium, e.g. within valve batteries and as a component of valve blocks in multi-port design. The pneumatic actuator section of the housing is made from stainless steel, while the automation module located above is made from PP (polypropylene). The protection class is IP 65, electrical connection is established via a standard M12 circular connector. All versions such as 2/2-way valves, T valves, tank valves and multi-port valves are available as a valve body.

GEMÜ® Press release

The essential advantages for the customer are:

- Lower price: As the design has resulted in a reduction of manufacturing costs, we have been able to lower the prices for the new valve between 10 - 16% compared to the conventional version, comprising the GEMÜ 650 valve and the GEMÜ 4222 combi switchbox.
- Reduced costs for installation: Integration of the automation functions in the actuator does away with time and cost intensive installation, tubing and piping work.
- Reduced operating costs thanks to rapid, automated commissioning, e.g. after changing the diaphragm.
- GMP-compatible design through significantly "smoothed" outer contours.
- Minimisation of potential faults such as leakages, connection and mounting errors as a result of integration.
- Simplified logistics and materials management at the customer, there is now only one article number for the complete valve.
- Detailed monitoring and diagnostic facilities, interference immunity due to AS interface.
- Simple connection to other field bus systems via AS interface.

Text under photo:

On the right GEMÜ 651, on the left the old version GEMÜ 650 with mounted pilot valve and electrical position indicator