**Flexible, precise filling with the latest generation of filling valves**

**To minimize the effort required to convert and maintain aseptic filling equipment, a unique, media-independent sealing concept is now available.**

Filling technology for liquids

The ever-increasing range of beverages, liquid foodstuffs, pharmaceuticals and decorative cosmetics that need to be safely dosed and filled in by machinery poses a huge challenge for plant engineers and operators. Furthermore, the different container shapes – from bottles to tins to sachets – increase the work required for each filling cycle.

Reduced conversion work thanks to cone-shaped seal

The valve specialist GEMÜ is reacting to these increased requirements by bringing an innovative filling valve platform to the market. It is based on the GEMÜ PD design that won the "ACHEMA Innovation Award". This new sealing concept comprises a highly resistant plug diaphragm (PD) made of modified PTFE (TFM™). This enables even carbonated media and media containing pulp or oil, such as lemonade or milk, to be filled aseptically. The cone shape also allows the pneumatic GEMÜ F40 filling valve and the motorized GEMÜ F60 filling valve to achieve an extremely high number of switching cycles and incredibly precise dosing with a positioning accuracy of up to 10 µm. The new sealing concept also enables hermetic separation of the actuator parts and the product area. These and other design features mean that the valves are FDA- and USP Class IV-compliant. They also meet the requirements for "Hygienic Design" and those of the Food Contact Materials Regulation (EC) No. 1935/2004.

Maintenance-friendly thanks to a cartridge spare parts system

The pneumatically operated GEMÜ F40 filling valve combines high Kv values and precise, fast activation with a compact design. Simultaneously, the patented cartridge spare parts system makes maintenance very simple and fast, eliminating long downtimes. Where necessary, a variety of accessories from GEMÜ's wide range, such as a stroke limiter or positioner, can be adapted for use with the filling valve.

All-round precision – even in mobile filling machines, cleanrooms or isolators

As well as increased flexibility, mobile systems are also very much in demand in some market sectors; if necessary, they may even need to be operated without compressed air. For this application – and indeed for any applications with stringent requirements when it comes to positioning accuracy – the GEMÜ F60 filling valve is the ideal solution. The valve is actuated in real time by its electronic control unit, meaning that it will be significantly easier for users to adjust or rearrange the filling machine when changing the medium or filling container in the future. By following freely programmable filling curves precisely, it is possible to implement optimum quantity control and filling speed for each medium and filling container. The servo actuator is particularly impressive thanks to its high positioning accuracy of up to 10 µm and a travel speed of up to 200 mm/s. A controller can be used to connect the motorized filling valve directly to the software-supported central machine control system for the filling machine. This makes it particularly suitable for use in linear or circular fillers, for filling medicinal products or for filling infusion bags. The GEMÜ F60 filling valve generates no exhaust air; as a result, it can even be used in cleanrooms or isolators.

Together, the GEMÜ F40 and GEMÜ F60 filling valves represent the foundations of the new GEMÜ filling valve platform. The range is currently being expanded piece by piece in order to create a modular platform that can be combined with individually designed filling points.