

New stainless steel ball valves for use in hygienically demanding applications

GEMÜ has developed new stainless steel ball valves in the nominal sizes DN 8 – 100. The new GEMÜ 740 series has been specially designed for demanding applications in the pharmaceutical and foodstuff industry.

Ball valves are subject to increased hygienic requirements in pharmaceutical production where valves typically have to exhibit minimum deadleg areas and smooth surfaces. Media remaining trapped in cavities of valves can contaminate medicines so cavity filling seats are incorporated to improve cleanability of residues and crystallising media.



The cavity filled seat of the 740 series from GEMÜ consists of two special half shells made from TFM™. This innovative sealing material complies with the stringent requirements of the US Food and Drug Administration (FDA) and conforms to FDA 21 CFR 177.1550. TFM™ is as resistant to chemicals and heat as conventional PTFE. It is also distinguished by a significantly smoother surface, a small pore volume, low cold flow properties, very low deformation under load and an almost universal chemical resistance. The internal surface finishes of the pipe connections and balls are mechanically polished and also electropolished to a low surface roughness of 0.6µm in the media wetted area which ensures good cleanability (CIP) and sterilisation (SIP) of the valves.

The spindle is triple sealed by pretensioned spring washers, V-rings and a conical gasket. The sealing package can be readjusted and requires little maintenance. The series is compliant with the TA Luft (German Clean Air Act). At the same time, this design ensures low friction as well as a long service life of the sealing system in conjunction with the finely machined spindle.

When open, the ball valves offer a good flow capability. The maximum permissible operating temperature is 180°C. In the case of steam, the maximum permissible steam pressure is 8 bar. The maximum permissible operating pressure is 63 bar for liquids in the nominal sizes DN 8 – 50 and 55 bar in the nominal sizes DN 65 – 100. Butt weld spigots to DIN 11850, DIN ISO 1127, ASME BPE as well as clamp connections in accordance with ASME BPE are available as standard connections. Other connections are available on request.

The GEMÜ 740 is a 3-piece ball valve with top flange. Besides the hand lever, pneumatic quarter turn actuators (GEMÜ 741) and motorized actuators (GEMÜ

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748) can also be mounted. The actuators are compatible with other ball valve actuators such as the GEMÜ 751 and GEMÜ 738. Extensive instrumentation in the form of electrical position indicators, combi switchboxes, as well as positioners and process controllers is available for the pneumatic actuators.

The ball valves comply with the safety requirements of Annex I of the European Pressure Equipment Directive (PED) for fluids of groups 1 and 2. They are suitable for use in non-particulate, inert, corrosive, liquid, gaseous media and steam. Besides applications in the pharmaceutical industry, they are ideal for applications in the cosmetics sector, biotechnology, process engineering or the foodstuff industry.

Kontakt

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