



TEFASEP® gold

The hard valve seat seal for
D-tec® stem diaphragm valves



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In addition to the already available standard elastomer materials, such as EPDM and FKM, now a hard seal option is available with TEFASEP® gold. It consists of a specially developed thermoplast that is so resistant to temperature and chemicals that it can withstand sterilization processes of 121°C up to 160°C. It is vital for high hygienic or aseptic processing. Another advantage of TEFASEP® gold is that it can easily be applied in traditional ultra clean processes with simple hot cleaning without sterilization. With TEFASEP® gold, the adaptability of valves to customer processes can be enhanced even further – from ultra clean to aseptic.

Growing demand for hard seals

The new seal is designed for the D-tec® line of stem diaphragm valves that stand out because of their very high contamination protection. The hard seal easily copes with sterilization processes at high temperatures and the handling of abrasive media without any problems. Therefore the material of the established TEFASEP® valve seat seal from the GEA Aseptomag® valve line is modified in such a way that the D-tec® valves can also be fitted with it.

Focus on process requirements

The hard, stable material compound convinces not only because of its high temperature and chemical resistance but its robustness also prevents the cold flow known from other thermoplasts and as a result contributes significantly to process stability. Together with the valve design, the material ensures a minimum contact surface between the housing and the seal which, in turn, increases the cleanability of the process system. Unlike an elastomer seal, the thermoplast uniquely requires a cleaning cycle at 80°C. As a result the O-ring suits itself to the valve seat and seals the system hermetically.

Only genuine with the golden sheen

The new TEFASEP® gold valve seat seal distinguishes itself from the proven TEFASEP® type for GEA Aseptomag® valve technology in appearance because of its bronze gold color and is available for all valve types in the D-tec® line. The material meets the international standards of the FDA (21 CFR § 177.1550), the EC (1935/2004 and 10/2011) and the 3A standard (numbers 20–24). Additionally, TEFASEP® gold complies with USP standards (USP Class IV – 121 °C) and is thus suitable for pharmaceutical and biotech applications.

Advantages of TEFASEP® gold at a glance

- Suitable for sterilization cycles with temperatures up to 160 °C
- High chemical resistance
- Wide field of application
- Compliant with FDA, EG, 3-A and USP
- No cold flow
- Good cleanability of the seat area



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GEA is a global technology company with multi-billion euro sales operations in more than 50 countries. Founded in 1881 the company is one of the largest providers of innovative equipment and process technology. GEA is listed in the STOXX® Europe 600 Index. In addition, the company is included in selected MSCI Global Sustainability Indexes.

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