

MULTISAFE Double Hose-Diaphragm Process Pump

Aseptic Design

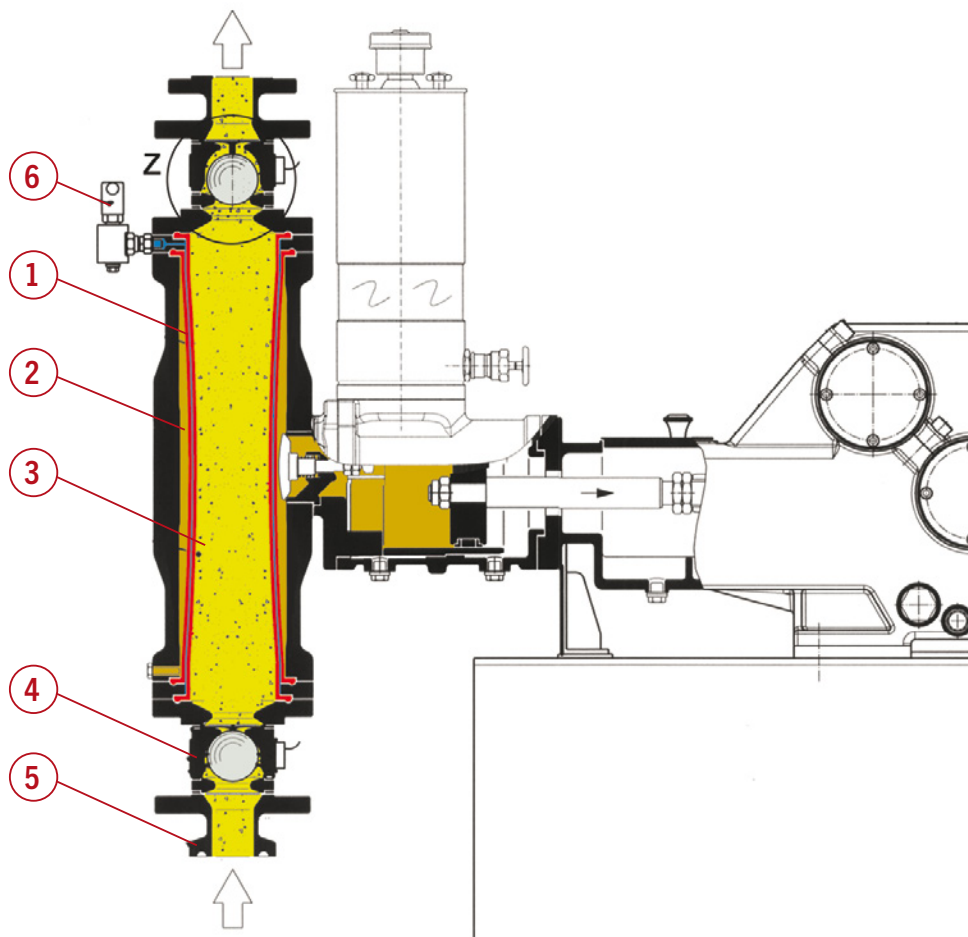


Fig. 1: MULTISAFE Process Pump for aseptic process technology

- 1. Hose-Diaphragm
- 2. Hydraulic Oil
- 3. Conveyed Fluid
- 4. Check Valve
- 5. Inlet Pipe
- 6. Hose-Diaphragm Condition Monitoring

Pumps in aseptic process technology have to provide a maximum of biological safety. FELUWA MULTISAFE double hose-diaphragm process pumps in aseptic design meet the necessary purity criteria and are FDA compliant in terms of fluid-wetted materials.

In order to ensure that not only the pump chamber (means the inside of the hose-diaphragm) can be fully drained prior to cleaning, but just as well the suction and discharge valves, MULTISAFE pumps can be provided with rapid-action draining systems. To this end, sealing elements of the check valves are mechanically lifted (manually or automatically) by means of devices that have been especially developed for this purpose. By this means, the conveyed fluid can completely escape downwards and the entire pump chamber can be fully drained without any residues via outlets at the suction socket. Accordingly designed check valves therefore reliably avoid pockets or puddles both in the area of the pump chambers and check valves.

Typical applications

- Pharmaceutical Industry
- Cosmetics Industry
- Biotechnology
- Foods

Bionics in pump design

- Unique design. Surfaces resistant to fluids and detergents. CIP and SIP capable.
- Pulsating vein (hose-diaphragm) as displacement means.
- Smooth pump chamber, easy to clean.
- The pump casing does not come in contact with the conveyed fluid.
- Linear flow path without deviations (see Fig. 2).
- FDA conformity of hose-diaphragms (see Fig. 3) and seals. No sedimentations in the clamping area.
- All fluid-wetted parts of the casing are made of low-carbon stainless steel 1.4435 with a ferrite content of < 0.5 %. Maximum surface roughness 0.6.
- Sandwich valves with linear flow path also suitable for shear-sensitive fluids. Easy to clean (see Fig. 2).
- Quick draining of check valves.
- 100 % safe against excess-pressure, vacuum and unfavourable suction conditions.

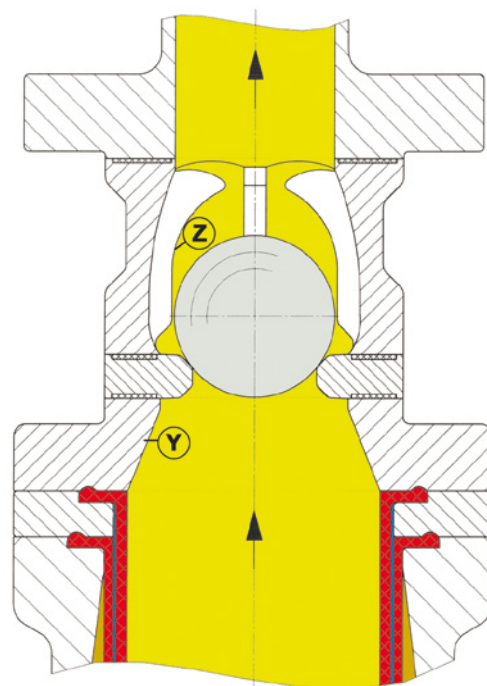


Fig. 2: Linear flow path without deviations

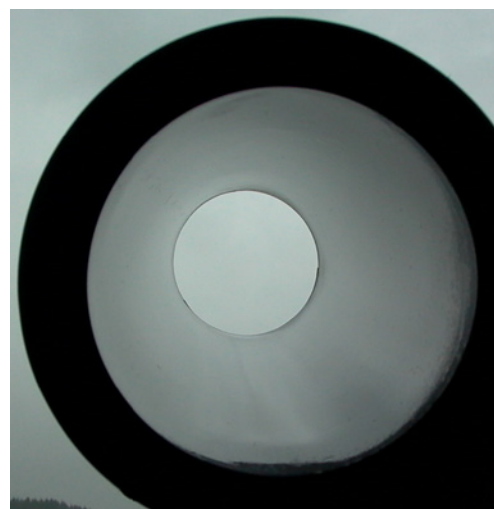


Fig. 3: Hose-diaphragm with FDA conformity