

Risk minimisation through self-monitoring pressure displays



Risk prevention

Reducing the risk of contamination to a minimum

For the highest demands in the process

- A second diaphragm prevents the contamination of the process medium through system fill fluid
- Reliable alarm signal (via HART® or as fault current monitoring) on rupture of the first diaphragm
- Hygienic design
- Suitable for CIP and SIP
- For wash-down areas

Your benefits

- Securing the already produced medium immediately is possible through automated countermeasures
- No manual monitoring required
- No undetected contamination of the process medium by the system fill fluid
- Monitoring that sterility is maintained at the measuring point
- Avoidance of reportable incidents (if these are required by authorities)
- Immediate digital alarm in the control room
- Easy and quick cleaning

Hygienic pressure measurement

For the pharmaceutical industry and aseptic food processing

- Pressure/vacuum measurement on pipelines, fermenters, bioreactors and vessels as well as with processing and transport of high-quality media
- Suitable for the production of active pharmaceutical ingredients (API)
- For the monitoring of processes with sterile steam
- For gases, vapours; liquid, pasty, powdery and crystallising media

Applications

- Blood plasma production
- Manufacture of microorganisms (in particular, virus cultures)
- Production of monoclonal antibodies



DMSU21SA

Patented WIKA development (US 10794787, NL 2019251)

Process connection with
TRI-CLAMP®



Ingold process connection



- Easy-to-read, large display
- TRI-CLAMP® connection easy to open

- Suitable for biofermenters with appropriate Ingold connection
- Suitable for tank blanketing monitoring



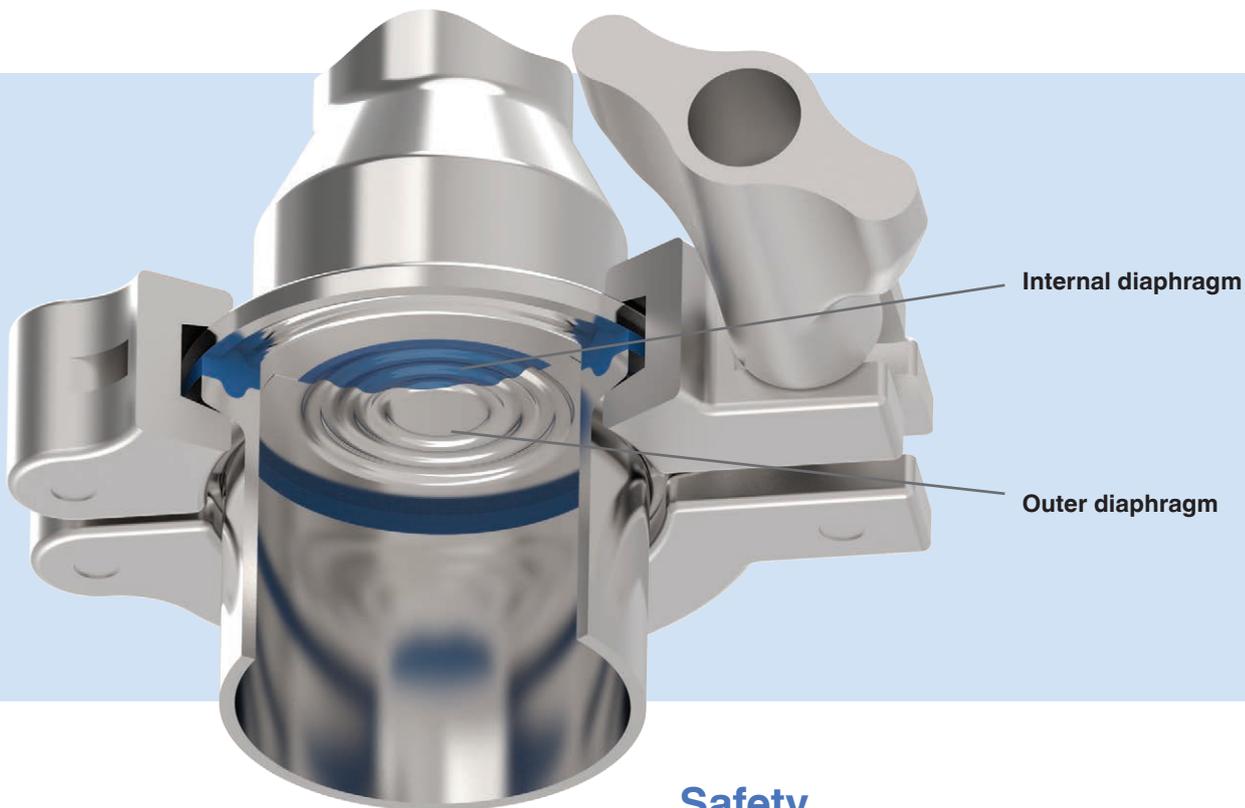
Functional principle of diaphragm monitoring

Diaphragm rupture

In the event of a diaphragm rupture, the pressure monitored in the intermediate space increases. As soon as the current output signal of the monitoring element exceeds the set point, an electrical alarm signal will be output. This signals the diaphragm rupture. WIKA's double-diaphragm design is the solution for critical processes where neither the medium should find its way into the environment, nor should the system fill fluid find its way into the product.

Normal operation

In normal operation, the pressure measurement and the diaphragm monitoring operate without restrictions within the performance limits of the overall system. The space between the two diaphragms is evacuated. With the monitoring element, this vacuum is measured and the diaphragm condition signalled.

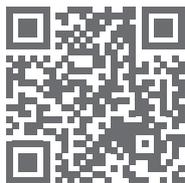


Safety

The measuring technology of the monitoring element withstands the process pressure despite the diaphragm rupture. The measuring function of the overall system is maintained without restrictions. The process safety is guaranteed because the materials used for the two diaphragms are the same as those of the wetted parts of the diaphragm seal. The overall system is, nevertheless, damaged and must be replaced immediately.



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WIKA Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Straße 30 · 63911 Klingenberg · Germany
Tel. +49 9372 132-0 · info@wika.de · www.wika.de

WIKAL
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