Biotechnology
Pharmaceuticals

# Diaphragm monitoring for diaphragm seals


WIKA
Part of your business

# DIAPHRAGM SEALS

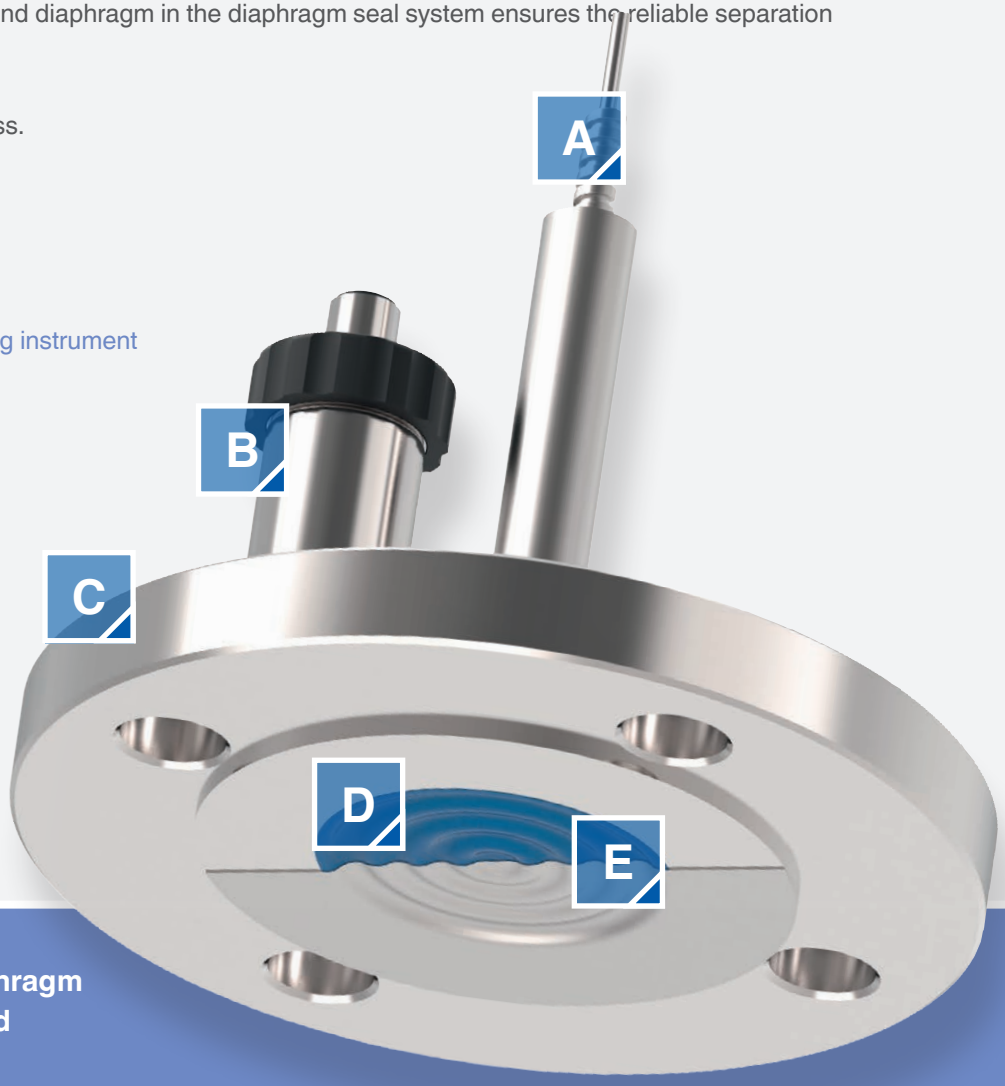
**The WIKA combination of diaphragm seal, pressure measuring instrument and monitoring instrument is ideally suited for the harshest or hygienic measuring tasks. The systems can withstand aggressive, contaminated or hot media and occurring cleaning vapour temperatures, and they ensure a secure or sterile connection between the medium and the diaphragm monitoring system. In this way the pressure can be determined reliably.**

# DIAPHRAGM MONITORING

WIKA's patented 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 (patent no. DE 19949831 and DE 102016015447).

In the event of a diaphragm rupture, a second diaphragm in the diaphragm seal system ensures the reliable separation of the environment and the process.
The measuring task can still be performed.
Time to act – without any risk for the process.

- **A** Connection to the pressure measuring instrument
- **B** Monitoring instrument
- **C** Diaphragm seal
- **D** Internal diaphragm
- **E** Outer diaphragm (wetted)




**Diaphragm seal with double-diaphragm system of the same shape; welded independently of each other.**

# VARIABILITY

**The diaphragm monitoring can be realised on a number of instrument variants. You can choose between three basic models:**

- Double-diaphragm system with flange connection and all welded, flush diaphragm
- Double-diaphragm system with threaded connection and internal, all welded diaphragm
- Double-diaphragm system with sterile connection and all welded, flush diaphragm

## Diaphragm monitoring system with sterile connection


## Diaphragm monitoring system with flange connection


Pressure gauges, pressure sensors, pressure switches or process transmitters are suitable as measuring and/or monitoring instruments.

In addition to an optical or electrical warning, system control or acoustic monitoring can also be realised by means of an electrical signal.

## DMS27

**Diaphragm monitoring system**

| | |
|---|---|
| Process connection | Threaded connection |
| Application | Process industry, with high measuring requirements |
| Material | Hastelloy |
| Data sheet | DS 95.23 |

## DMS34

**Diaphragm monitoring system**

| | |
|---|---|
| Process connection | Flange connection |
| Application | Process industry |
| Material | Monel |
| Data sheet | DS 95.18 |

## DMSFP

**Diaphragm monitoring system**

| | |
|---|---|
| Process connection | Clamp connection per DIN 32676 |
| Application | Sanitary applications |
| Material | Stainless steel 1.4435 (316L), UNS S31603 |
| Data sheet | DS 95.20 |

# FUNCTIONAL DESCRIPTION

### Diaphragm rupture detection

As soon as the monitoring instrument detects any change in pressure, the diaphragm monitoring system must be replaced.

### Process pressure

Should a diaphragm rupture occur, the full process pressure acts on the monitoring instrument. In the event of a diaphragm rupture, the monitoring instrument must therefore be designed for this process pressure.

### Medium

In the event of a diaphragm rupture, the measuring system of the monitoring instrument comes into contact with the medium. The measuring system must therefore be suitable for this medium.

### Temperatures

The same process conditions apply to the monitoring instrument as to the pressure measuring instrument.

**WIKA Alexander Wiegand SE & Co. KG**
Alexander-Wiegand-Straße 30 · 63911 Klingenberg · Germany
Tel. +49 9372 132-0 · Fax +49 9372 132-406
info@wika.de · www.wika.de

WIKA
Part of your business

13227505 07/2017 EN