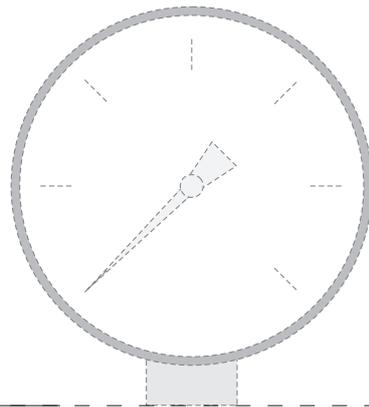
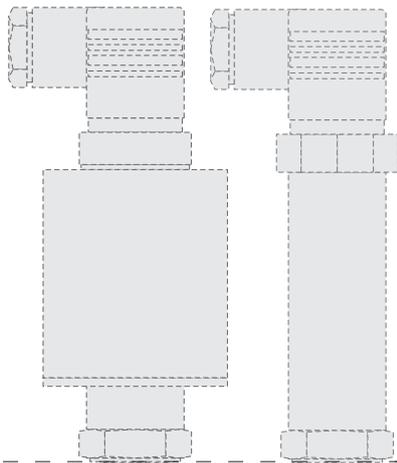
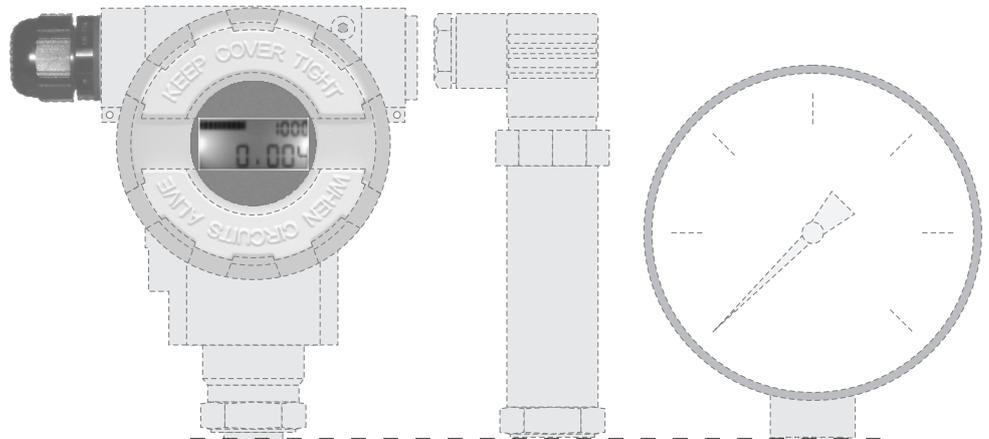
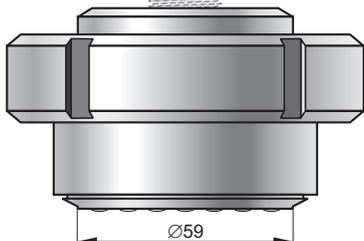
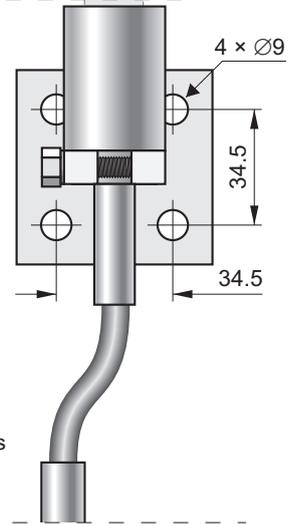


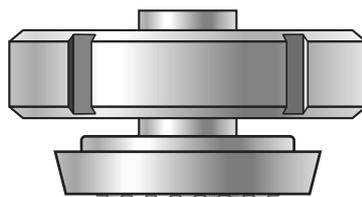
# Sanitary diaphragm seals



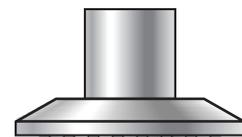
**Direct or remote connection with:**  
 smart and analog pressure and differential pressure transmitters gauges: Ø63, Ø100, Ø160



**S-Poziom 50mm diaphragm seal**

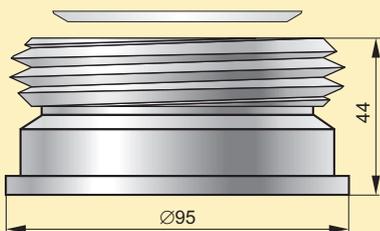


**S-DIN 50mm diaphragm seal**

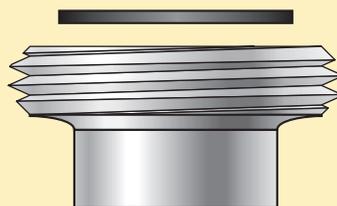


**S-Clamp 2" diaphragm seal**

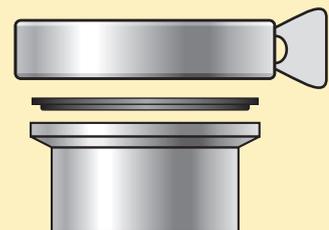
Fitting accessories for sanitary diaphragm seals if required



**Socket S-Poziom with a gasket**



**DIN 11851, size 50mm connection with a gasket**



**Tri-Clamp, size 2" connection with clamp and gasket**

## Application

The diaphragm seal is a pressure-transmitting, diaphragm-type device. The pressure signal is sent to the cooperating pressure measuring device (pressure transmitter, pressure gauge) through manometric liquid filling the space between the separating diaphragm of the seal and the pressure measuring device. The diaphragm seal task is to isolate the pressure measuring device from damaging impacts caused by either medium or installation:

- low or high temperature, increased viscosity, impurities;
- vibrations of the installation (remote diaphragm seal);
- pressure fluctuations.

The both S-DIN and S-Clamp types of sanitary diaphragm seals can be used under aseptic conditions. They are typically applied to measure the pressure of media in the food and pharmaceutical industries.

Aseptic S-Poziom separator is typically mounted in the bottom parts of tanks. The construction has a diaphragm placed forward and so it does not make a hollow in the surface of the tank bottom part, which eliminates the settling of either the material or washing agent in a connection of the pressure device.

## Maximum measuring range 25bar

### Recommended minimum measuring range (bar), depending on the type of the set: pressure measuring device - diaphragm seal

Diaphragm seal type	Transmitters Smare transmitters*, PCE-28	Gauge Ø63	Gauge Ø100	Gauge Ø160
direct	0.1	2.5	6	6
remote	0.5	6	6	6

\* The ranges given in the table for smart transmitters should be taken as set ranges.

**Note:** for measuring ranges lower than those listed in the table, we recommend special models of diaphragm seal, i.e.: Clamp 3" and DIN 80mm

### Additional absolute zero error resulting from ambient temperature fluctuations, depending on the type of the set: pressure transmitter - diaphragm seal

Diaphragm seal type	Absolute zero error	
	S-Clamp and S-DIN	S-Poziom
direct	0.8 mbar / 10°C	0.3 mbar / 10°C
Remote (2m capillary)	5 mbar / 10°C	3 mbar / 10°C

For a set: pressure transmitter - special diaphragm seal (special diaphragm seal means the larger diaphragm diameter), there is the following relation: the quantity of thermal errors decreases proportionally to the cubed value of the active diameter of the separating diaphragm (i.e. to the diameter value raised to the third power).

An additional zero error, resulting from temperature fluctuations in a medium, depends on the temperature gradient in the oil-based diaphragm sealing system. The error value is, in any case, significantly smaller than the error value shown in the table.

#### Medium temperature range

- 30...200°C for remote diaphragm seal
- 20...150°C for direct diaphragm seal
- 30...85°C for measuring ranges to -1bar

#### Material of diaphragm and seal

00H17N14M2 (316Lss)

#### Special versions

- ◇ filling liquid - edible oil (medium temp. range -10...150°C)
- ◇ Other sanitary seals, eg. DIN 25 mm, DIN 40 mm, Tri-Clamp 1", Tri-Clamp 1,5", SMS 50 mm, DRD, Homogenizator, Varivent
- ◇ Seal with customised connection
- ◇ Direct diaphragm seal for medium temp. over 150°C
- ◇ Others

## Ordering procedure

direct diaphragm seal: **pressure measuring device / S-..... / special version (description)**

remote diaphragm seal: **pressure measuring device / S-.....K / K = ..... m / special version (description)**

Transmitter or gauge – see the code in the appropriate catalogue sheet

Type and size of sanitary seal

Capillary length

**Example:** PCE-28 pressure transmitter, measuring range 0÷6bar, field casing, direct sanitary diaphragm seal type S-DIN, size 50mm

**PCE-28 / 0 ÷ 6 bar / PZ / S-DIN 50**