



General Information

These operating instructions contain information necessary for the proper installation and use of diaphragm seals. In addition to these instructions, be sure to observe all statutory requirements, applicable standards, the additional technical specifications on the accompanying data sheet, the specifications indicated on the type plate and, especially, operating instructions and data sheet for the specific pressure gauge being installed.

Intended Use

As components in a pressure measuring system, diaphragm seals – metallic separating diaphragms – are intended to prevent the intrusion of the medium being monitored into the measuring device itself.

General Safety Notes

The installation, set up, service or removal of this device must only be done by trained, qualified personnel using suitable equipment and authorized to do so by the plant operator.



Improper installation or use of these devices or the use of damaged or defective devices may result in severe injury or property damage!

Installation and Commissioning

Before installing the device, be sure that the device is suitable for the intended process application with respect to pressure range, resistance to overpressure, compatibility with the monitored medium, thermal stability and pressure port fitting type. The gaskets used in the installation must be compatible with the used process connection and resistant to the particular medium being monitored.

Before placing the intermediate diaphragm seal connection in service, check it for leaks under pressure.

Only remove the protective cap or protective wrapping from the separating diaphragm immediately before installation to prevent soiling, contamination or damage.

Do not touch the separating diaphragm. In applications with measuring ranges extending up to 10 bar, there is a risk of deformation of the diaphragm. Such deformation may influence the zero point and thus the measuring characteristics of the devices in which such diaphragms are used.

Pressure transmitters and diaphragm seals are a whole, closed system and must not be separated from each other.

Excessive tightening of the threaded process connections (too much torque applied during assembly) may, particularly in the case of small measuring ranges, lead to zero-point offsets at the pressure transmitter.

Devices with a Capillary Tube

In systems with a capillary tube that are used for vacuum monitoring, make sure that the pressure transmitter is always installed beneath the diaphragm seal.

The standard adjustment at the factory is always made with the pressure transmitter and the diaphragm seal positioned at the same height. Differences in height between the diaphragm seal and the pressure gauge determined by the actual installation conditions can usually be compensated for at the pressure gauge. When making such height-based corrections, be sure to observe the adjustment limits.

Route and mount capillary tubes so that they are kept free of vibration. Wind up the extra tube length into a ring with a diameter of about 50 cm. Vibrations and temperature changes may affect the resulting measurement (reading).

Operation

Depending on the system design, process temperatures and ambient temperatures may cause measuring systems with diaphragm seals to exhibit zero-point changes (offsets) at the pressure gauge. You can request an error calculation for critical processes.

Removal

Before attempting to remove the diaphragm seal, be sure to first relieve the process system pressure. Shut off the pressure source for all feed lines to the pressure gauge and relieve the pressure in them.



Attempting to remove the device from a still-pressurized system may result in severe injury.

Be sure that residue in the process system and in the diaphragm seal itself do not present a danger to humans or the environment. During dismantling and removal, the diaphragm seal must be easy to remove from the process system. Do not apply any force during removal work. It should not be necessary to do so. After the diaphragm seal has been removed, seal off the measuring point or mark the open process accordingly.



Removed diaphragm seals may contain hazardous deposits and residue. When removing or transporting these devices, be sure to take appropriate safety precautions.