

APPLICATION GUIDE

Sanitary service with diaphragm seals

How a diaphragm seal protects a gauge from viscous, corrosive or clean process media, and when a sanitary gauge is the simpler choice.

Instruments covered

Series P450, Diaphragm seal, Series P200

What a diaphragm seal does

A diaphragm seal sits between the process and the gauge. A thin stainless steel diaphragm takes the process pressure and passes it through a sealed fill to the gauge, so the process media never enters the gauge itself.

When to use one

- Viscous media that would clog a gauge socket, such as syrups, slurries and heavy oils.
- Corrosive media that would attack the gauge internals.
- Clean processes where the media must not sit in a dead leg inside the instrument.
- Lines that are cleaned in place, where the wetted surface must be smooth and easy to clean.

Two ways to build it

- A Series P450 sanitary gauge: the gauge and seal come as one unit with a sanitary clamp connection. This is the simpler choice for food, beverage and other clean processes.
- A standard gauge with a separate Diaphragm seal: the seal fits a 1/4 inch NPT connection, so you can pair it with a gauge such as Series P200 on an existing threaded line.

Installation notes

1. Treat a filled seal and gauge as one unit. Separating them in the field lets the fill between them escape.
2. Mount the unit with the gauge above the seal where you can.
3. On a clamp connection, use a gasket suited to your process and your cleaning chemicals.
4. Do not press or probe the diaphragm. A dent changes the reading.

Check compatibility

Confirm that stainless steel wetted parts suit your process media and your cleaning cycle before you order.