

Diaphragm Pressure Gauges

Long term protection – viscous, corrosive media – pressure overload safety – Xylan coating

Diaphragm pressure gauges with an open measuring flange are especially well suited in rough conditions with viscous, crystallizing and mediums that carry solid particles.

Schmierer Germany has introduced a specialized Graphene infused PTFE Xylan 1427 coating for diaphragm gauge membranes as a standard for pressure ranges from 0-6 to 0-25 bar. This coating provides continuous long-term protection against corrosion and chemicals for the Mineral Oil and Chemical Sector.



Working Principle



Diaphragm PG Movement with special rod to carry on the membrane deflection to the movement gear system

A thin corrugated membrane is built-in between the two flanges of the diaphragm pressure gauges. Pressure applied on one side of the membrane will deflect itself against the direction of the incoming pressure. This deflection of the diaphragm is a measure for the incoming pressure and is carried over to a gear segment onto the gear of the movement. This technology provides a much higher overload safety (up to 40 bar) than standard Bourdon Tube gauges.

For rough environments with vibrations or sudden pressure changes the Manodamp® mechanical movement dampener can be added to provide smooth pointer reading.

Diaphragm Seals are also available in Tantalum and other coatings. For highly aggressive environments the connection socket and flanges can be made from special materials (316 Ti, PP; PVDF, PVC) and protected with an additional lining.



PTFE coated Diaphragm Seal with protective lining (white)

Specifications



Pressure Range:

PGU series: 0-16 to 0-400 mbar - overload safety up to 10 bar

PKU series: 0-1 to 0-40 bar, -1 -0 to -1 to 40 bar - overload safety up to 40 bar

Dial Size: 100 - 160 - 250 mm

Accuracy: $\pm 1,6\%$ of the upper range