

PRESSURE GAUGE - FILLED PRESSURE GAUGE

Why use a filled pressure gauge?

A filled Pressure gauge is essentially a dry pressure gauge where the casing has been filled with fluid, usually glycerine or silicone, although other liquids can be used.

They are usually used where the pressure gauge is going to be operating in a harsh environment and is likely to encounter vibrating loads and dynamic shock.

The benefits of using a filled gauge in these environments are as follows;

- Dampens mechanical vibration
- Dampens pulsation caused by pressure oscillation and pressure spikes
- Lubricates internally moving parts reducing everyday abrasion and material fatigue counteracting failure.
- Prevents internal corrosion by moisture and other corrosive liquids away – especially in environments where condensation will be a factor.
- Decreased possibility of moving the pointers mechanism away from zero
- Decreased prospect of inaccurate readings
- Increase operating lifespan of the pressure gauge.

Glycerine filled pressure gauge

Glycerine is the most commonly found liquid in liquid filled pressure gauges. It is a relatively inexpensive clear material well suited to applications where either oscillating pressures or vibration are present. The damping effect of the glycerine will stable the movement of the pointer, making it easier to read against the scale.

Glycerine gauges operate best in the -20C to +60C temperature range.

Silicone filled pressure gauge

In comparison to Glycerine, Silicone has a lower viscosity and is a better suited material for applications with extreme temperature variations. It is primarily relied upon when a pressure gauge requires protection against vibration or oscillation in a temperature range greater than 60C or below -20C.

