

KNOWLEDGE HUB

Pressure gauges

PROCESS GAUGE

What is a process gauge?

A process gauge is designed to meet the demanding needs of a processing environment, including oil, gas, chemicals, plastics, textiles, outdoor environments amongst others.

The gauge needs to perform under harsh conditions, where wide variations in both temperature and pressure are common. The design and materials of construction are selected to provide reliable service in applications where corrosive atmospheres, corrosive media, pressure pulsation and heavy vibration are present.



Selecting the wrong gauge for a process environment will require more maintenance involvement, and will eventually lead to a reduced working life with resultant gauge failure.

To select the right gauge for a process environment, it is important to consider the following:

- **Gauge build** – ensuring the Bourdon tube is manufactured with high quality, corrosion resistant materials to ensure durability.
- **Case materials** – should be selected for durability and corrosion resistance, eg Stainless Steel or Phenolic casings.
- **Silicone or glycerine filling** – to help prolong the life of the instrument and further protect against water or chemical ingress.
- **Laser welding** to improve robustness and withstand extreme vibration .
- **Tempered glass for the window** is preferred to withstand harsh corrosive environments. Regular glass windows can be susceptible to scratch marks, discolouration and cracking in extreme conditions.
- **Bayonet bezel** should be used in conjunction with tempered glass, to ensure the window is held firmly in place.
- **Accuracy Class 1** should be achieved as standard for these gauges.
- Process gauges should reach **IP 67** protection as a minimum.
- A flow restrictor can offer added protection against pressure spikes.
- For severe pressure fluctuations, the use of a **snubber** should also be considered.

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