

- Gauges should normally be fitted with either a cock or valve to permit checking. These MUST be opened or closed slowly to avoid a sudden surge of pressure being applied to the gauge.
- Gauges which have a static head of liquid acting upon them, must be calibrated and / or marked accordingly.

Inspection:

- A gauge which does not return to zero when the pressure source has been removed, could be faulty.
- Suspect gauges should be checked / repaired / replaced.
- Gauges should be checked periodically, for operation and accuracy, by competent personnel, using appropriate equipment.
- Before removing a gauge, ensure that it has been isolated and is no longer under pressure. Remove slowly as a precaution.
- Ensure the remains of the process fluid within the gauge, are not dangerous.

For further information, reference should be made to: EN 837-1, 837-2 & 837-3 and the Pressure Equipment Directive (PED.)

PRESSURE GAUGES: INSTALLATION AND OPERATION MANUAL



SAFETY WARNING

INCORRECT USE OF PRESSURE GAUGES CAN CAUSE DAMAGE AND INJURY

- **OXYGEN USE:** ONLY SAFETY PATTERN GAUGES, MANUFACTURED FOR USE ON OXYGEN AND SPECIALLY MARKED, MUST BE USED. OXYGEN GAUGES MUST BE KEPT FREE FROM OIL CONTAMINATION AS THIS COULD RESULT IN AN EXPLOSION.
- **ACETYLENE USE:** ONLY SPECIAL SAFETY PATTERN GAUGES MARKED 'ACETYLENE', MUST BE USED.
- **GLYCERINE FILLED GAUGES:** MUST NOT BE USED WITH OXYGEN OR OTHER STRONG OXIDISING PROCESS FLUIDS.

If you are unsure of the suitability of this gauge consult the supplier, particularly when:

- It is for use on a Dangerous Substance e.g. Explosive, flammable, toxic or oxidising, at pressures above 200 bar.
- It is to be used on gas or steam: (certain gas applications require safety pattern gauges or gauges with a blow-out device.)
- Pressure medium is corrosive, may solidify in the gauge, may contain solids in suspension or may not be compatible with the wetted parts of the gauge (normally Brass and Phosphor Bronze or Beryllium Copper.)
- Pressures are expected to pulsate violently or occur with sudden shock.
- It is to be used in a hostile environment or in extremes of temperature.

Installation:

- Surface mounting gauges with a blow-out release at the back MUST be mounted at least 20mm away from the surface panel by means of distance pieces.
- The process connection must be compatible with the gauge.
- Where parallel threads are used on the shank, the joint MUST be made on the flat seating using a washer of a suitable material.

- To avoid twisting the gauge internals, all threaded joints MUST be tightened by using an appropriate spanner, applied to the hexagon or square provided on the screwed shank: and not by grasping the case.
- The working pressure should not exceed 75% of the full - scale range for steady pressures and 65% of the full-scale range for fluctuating pressures.
- Where there is a risk of vibration and / or mechanical shock, the gauge should be mounted remotely and connected using flexible piping. Gauges with a liquid filled case can be used as an alternative where vibration is the problem.
- Working fluids at a temperature exceeding 60 degrees °C should not enter the bourdon tube or other wetted parts.
- If used on steam or other hot gases or liquids, gauges MUST be protected using an effective syphon or by other means.
- Gauges used on water may burst if exposed to frost.
- All gauges should be mounted in a vertical position unless otherwise agreed with the supplier.
- The connection pipes to surface and flush mounted gauges should be flexible to avoid any strain on the gauges.