

IMPORTANT – INCORRECT SELECTION, INSTALLATION OR USE MAY CAUSE EXPLOSION LEADING TO DAMAGE AND INJURIES

The following information should be carefully read **BEFORE** selection, installation or use of a pressure or vacuum gauge

When selecting a pressure or vacuum gauge for the application, the following points must be taken into consideration and must be acted upon where appropriate to remain in accordance with BS EN 837-2 : 1998 and for the general safety of users and the protection of plant and equipment.

< Selecting the correct pressure gauge >

- 1) **Working Pressure** - On a static load, a gauge should not be continuously used above 75% of its maximum scale graduation. On cyclic pressures a gauge should not be continuously used above 65% FSD.
- 2) **Pulsating Pressure** - Fluctuating, pressure shocks and high frequency pressure oscillation will all severely reduce the normal life of a pressure gauge. These are best avoided but if not possible suitable protection devices such as restrictor screws or snubbers are available.
- 3) **Maximum Pressure** - Gauges should never be pressured beyond the maximum scale graduation as this may cause gauge failure. If over-pressure capability is required, please contact the manufacturer as on certain models gauges can be built to withstand over-pressure. Alternatively a pressure relief valve should be installed.
- 4) **Pressure Medium** - The pressure medium entering the gauge must not be corrosive or damage the internal wetted materials.
- 5) **Hazardous Medium** – Extreme caution should be taken when selecting, installing and using a gauge on explosive, flammable, toxic or oxidizing materials. These should only be purchased and installed by a competent and qualified instrument engineer.
- 6) **Medium Temperature** – This must not exceed the safe operating limits of the gauge. As a guide the medium temperature should not exceed 65°C but this should always be checked with the manufacturer. Should the medium temperature exceed 65°C a syphon should be fitted to reduce the medium temperature or a different construction gauge must be considered.
- 7) **Gases & Steam** – Special safety aspect gauges should always be used. These are Classified S1 (blow-out device fitted), S2 (safety pattern type) or S3 (safety pattern type with solid baffle wall). Only on gauge diameters less than 100mm and pressures less than 25 bar is a safety aspect gauge not required.

Steam must not enter the gauge (see medium temperature in 6) above).
- 8) **Oxygen & Acetylene** – Special oxygen use or acetylene use safety gauges must be used. For oxygen these must be either S2 or S3 safety type (depending on diameter) and all parts must be totally oil free. The dial must be clearly marked "Oxygen" and "Use No Oil" or the crossed out oilcan symbol.
- 9) **Glycerine Filled Gauges** – Never use with strong oxidising agents such as (but not limited to) Oxygen, Chlorine, Nitric Acid and Hydrogen Peroxide.