

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 installing 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.

< Installing pressure gauges correctly >

- 1) **Tools** – Always use the correct size spanner on the gauge square or hexagonal block, never tighten gauge up using the case.
- 2) **Joints** – All pressure connections must be leak tight and when pressure first applied should be checked. Gauges with parallel threads should be fitted using a suitable washer and fully seated onto the fitting face. Gauges with tapered threads must be sealed using suitable jointing materials.
- 3) **Isolation** – It is highly recommended that an isolating valve or gauge cock should always be fitted between the “line” and pressure gauge to enable gauge removal without “line” interruption. Always open any valve or gauge cock slowly to avoid pressure shock to gauge.
- 4) **Vibration** – This can severely reduce the normal life of the gauge. Use a glycerine or other liquid filled gauge and ideally mount gauge away from vibration source and connect with flexible pipe/hose.
- 5) **Ambient Temperature** – Gauge accuracy and safety can be affected. Always try and isolate gauge from heat. As a guide, if the gauge is too hot to touch it is exceeding its design limits. Any process fluid must never be allowed to freeze within the gauge as this will damage the gauge.
- 6) **Surface Mounting Gauges** – Should be connected with flexible hose/pipe to avoid transmitting vibrations and to allow medium expansion or contraction due to temperature fluctuations. When tightening the connection an opposing spanner must be used on the gauge square or hexagonal block. Any gauge with a safety blow-out device/bung at the back should always be mounted at least 20mm from the mounting surface.
- 7) **Flush/Panel Mounting Gauges** – Should be connected with flexible hose/pipe to avoid transmitting vibrations and to allow medium expansion or contraction due to temperature fluctuations. When tightening the connection an opposing spanner must be used on the gauge square or hexagonal block.
- 8) **Gauge Orientation** – Gauge must always be installed vertically unless specially manufactured and calibrated for angled use.
- 7) **Glycerine Bung** – Atmospheric temperature changes may cause pressure to build up within the gauge resulting in pointers lifting off zero and/or reading or calibration inaccuracy. This typically happens with vacuum or lower pressure ranges. Should this be the case then the glycerine bung should be cut or pierced according to the label.
- 8) **Liquid Lines** – Any static head of liquid must be compensated for during gauge selection and calibration. Lines should always be completely full of liquid and care should be taken to avoid loops where air or vapor can accumulate or cause air locks.
- 9) **Air/Gas Lines** – Pipework should always rise continuously to the gauge to allow any condensing moisture to drain away from gauge.