



# INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS

## 4 1/2" INDUSTRIAL GAUGE - 4PG-1 & 4UG-1



**Warning:**

Pressure gauges must be selected and installed so that the possibility of failure resulting in injury or damage caused by misuse or misapplication is minimized. For correct selection and use of gauges, refer to ASME B40.1 which can be obtained from the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017. Important factors for proper gauge selection are:

**Pressure:** The range of the gauge should generally be twice the working pressure. The working pressure in all cases should be limited to 75% of the gauge range. Where alternating pressure and pulsation are encountered, working pressure should be limited to  $2/3$  of the gauge range.

**Process:** Wetted parts must be compatible with the measured media.

**Pulsation / Vibration:** Pressure pulsation and vibration could result in fatigue failure of the measuring system. Therefore, dampening provisions such as liquid filling of the gauge, installing flow restricting devices or isolating from the vibration source should be considered.

**Temperature:** Excessive temperature exposure may result in damage to the measuring system and/or gauge outer parts, case, gasket, and window. Preventative temperature lowering devices such as a pigtail siphon should be considered.

# INDUSTRIAL GAUGE INSTRUCTIONS

## **A. General:**

Weiss gauges are designed and built to deliver long and reliable service under conditions of severe stress. For inquiries concerning gauge selection and operation, the American Society of Mechanical Engineers specification ASME B40. 1 should be consulted.

## **B. Installation:**

Gauges should always be mounted by using the wrench flats (squares) provided on the pressure connection. Under no circumstances should the pressure connection be tightened by applying force to the gauge case.

It is preferable to mount gauges in a location free of mechanical vibration . If this is not possible, a liquid filled gauge or a flexible tube connection may be necessary.

The gauge should be located so that it is not exposed to abnormally low or high temperatures. This may cause an additional temperature error, depending on the deviation from the reference temperature of 23°C(73°F). For steam service, the gauge must be protected by a water-filled syphon.

If severe pulsation is present, the gauge should be equipped with a properly sized orifice restrictor screw in the connection or be installed with the needle valve in line with the pressure connection.

## **C. Maintenance:**

All gauges should be checked regularly for wear and tear, accuracy, and proper functioning by comparing them to a Precision Test gauge or a dead weight tester. Replace all broken or damaged parts immediately.

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