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PRESSURE GAUGE - HOW TO SELECT

To effectively select a pressure gauge, you need to consider the following:

Gauge range

The normal operating pressure should be confined to between 25% and 75% of the scale, if process pulsation is present then the maximum operating gauge pressure should not exceed 50% of the full-scale range. The scale on Brannan's standard industrial range is usually printed in either bar, psi or dual scale (bar & psi).

Gauge accuracy

Accuracy is usually defined as a percentage of the full-scale range, as a guide the following is often used:

Test gauges	0.25 to 0.1%
Critical processes	0.5%
General industrial processes	1% or 2% for less critical

Gauge dial size

Typically, they range from 38mm (1½") to 400mm (16"), with the most common being 100mm (4") and 150mm (6") for process gauges and 250mm (10") for test gauges. When determining the dial size consider readability, space limitations and the gauge accuracy. Brannan's standard Industrial range covers from 38mm (1½") to 150mm (6).

Gauge connection

Gauges are available with a variety of thread connections including BSP, NPT, DIN, JIS & SAE. The most commonly used sizes are 3/8" and ½", Brannan's standard industrial range covers from 1/8" to ½" in both the BSP & NPT thread form.

Gauge mounting

The following mounting options should be considered when selecting a pressure gauge. Brannan's standard industrial range includes bottom, mid back & lower back connections:

Mounting position	Connection position
Direct stem mount	Bottom connection
Wall or surface mount	Bottom connection
Panel surface mount	Back connection (mid or lower)
Panel hole U-Clamp flush mount	Back connection (mid or lower)
Panel hole front flange flush mount	Back connection (mid or lower)

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Gauge material:

Cases are typically available in ABS plastic, painted steel, chrome plated steel, brass, stainless steel, aluminium and phenolic turret. Cases are available in three types with Type 3 (solid front case) offering the highest level of protection should a gauge fail. The material selection and safety requirement should be based on the environment in which the gauge is to operate.

The cases in Brannan's standard industrial range are supplied in either ABS plastic, painted steel, stainless steel or phenolic and are offered in Type 1 or 2 (standard or case with blow-out disk).

Gauge filling

Both pulsation and vibration will decrease gauge life if not properly dampened. Gauges subject to pulsation and vibration should be liquid filled or internally dampened.

Available accessories that minimize stresses on the Bourdon tube/movement and extend the life of the gauge include pulsation dampeners, pressure snubbers, gauge savers, diaphragm seals and (pigtail) siphons. Gauges from Brannan's standard industrial range requiring dampening are glycerine filled.