

Pressure Gauges

Gauge Size

150mm

100mm

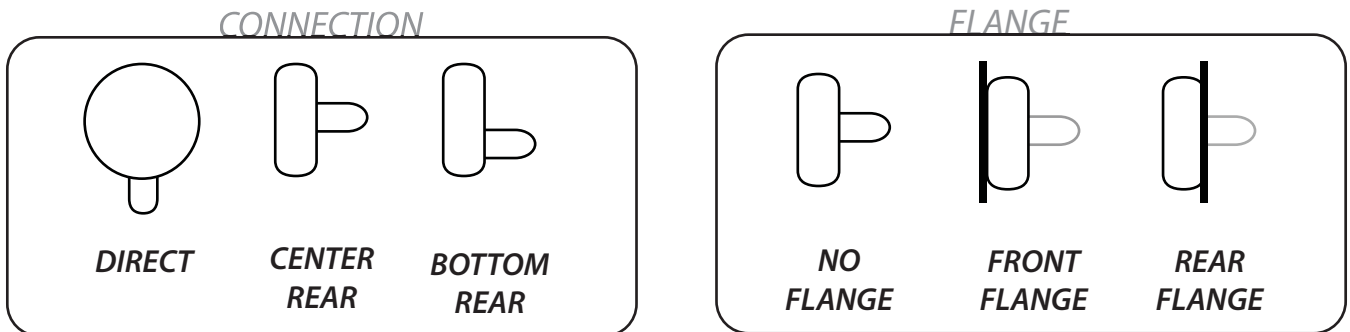
63mm

Your first consideration should be the size of the gauge - how big does it need to be? Gauges aren't the most accurate method of reading a process variable, so make sure it is large enough that you can easily get a reading near the accuracy you require.

Gauges are usually found with 63mm, 100mm and 150mm dial sizes, but some are also found in unusual sizes that are both larger and smaller.

Mounting

Next, consider how you are mounting the gauge. Below is a series of diagrams of different mounting options - choose the most appropriate one for your application.



Also consider your thread type. In Australia, 1/4" BSPT is common for 63mm gauges, while 3/8" BSPT and 1/2" NPT is common for 100mm gauges.

In the above diagram, the 'Connection' and 'Flange' options can be used interchangeably - you can have a direct mount gauge with a rear flange, a bottom-rear gauge with a front flange etc.

Construction

Gauges have two major components - the 'case' or outside of the gauge, and the 'wetted parts', or 'tube', which include all of the components that are actually exposed to your process, including the bourdon tube inside and process connection.

Cases come mainly in plastic or stainless steel, while wetted part materials include brass, copper and stainless steel, as well as some purpose-built gauges that use exotic materials.

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Pressure Gauges

Range

The range of your gauge is of course vital. Gauges come in a number of pre-defined pressure ranges that you should try to use, if possible. While gauges can be custom scaled and labelled, this is an expensive process with a long delivery time - sticking to the standard gauge ranges will ensure low price and high availability.

METRIC GAUGE RANGES

-100 to 0 kPa	10 Pa
-100 to 150 kPa	16 Pa
-100 to 300 kPa	25 Pa
-100 to 500 kPa	40 Pa
-100 to 900 kPa	60 Pa
-100 to 1500 kPa	100 Pa
-100 to 2400 kPa	160 Pa
	250 Pa
	400 Pa
	600 Pa
	1000 Pa
	1600 Pa
	2500 Pa
	4000 Pa
	6000 Pa
	1 kPa
	1.6 kPa
	2.5 kPa
	4 kPa
	6 kPa
	10 kPa
	16 kPa
	25 kPa
	40 kPa
	60 kPa
	100 kPa
	160 kPa
	250 kPa
	400 kPa
	600 kPa
	800 kPa *
	1000 kPa
	1600 kPa
	2500 kPa
	4000 kPa
	6000 kPa
	10 MPa
	16 MPa
	25 MPa
	40 MPa
	60 MPa
	100 MPa
	160 MPa
	250 MPa

IMPERIAL GAUGE RANGES

30" Hg V— 15 psi	15 psi
30" Hg V— 30 psi	30 psi
30" Hg V— 60 psi	60 psi
30" Hg V— 100 psi	100 psi
30" Hg V— 150 psi	160 psi
30" Hg V— 300 psi	200 psi
	300 psi
	400 psi
	600 psi
	800 psi
	1000 psi
	1500 psi
	2000 psi
	3000 psi
	4000 psi
	5000 psi
	6000 psi
	10 000 psi
	15 000 psi

800kPa gauges are not 'officially' a standard size, but are usually available ex-stock from most manufacturers.

For gauges with a range under 60kpa, a Capsule gauge is usually required. This gauge has a large diaphragm above the connection to allow measurement of such low pressures.