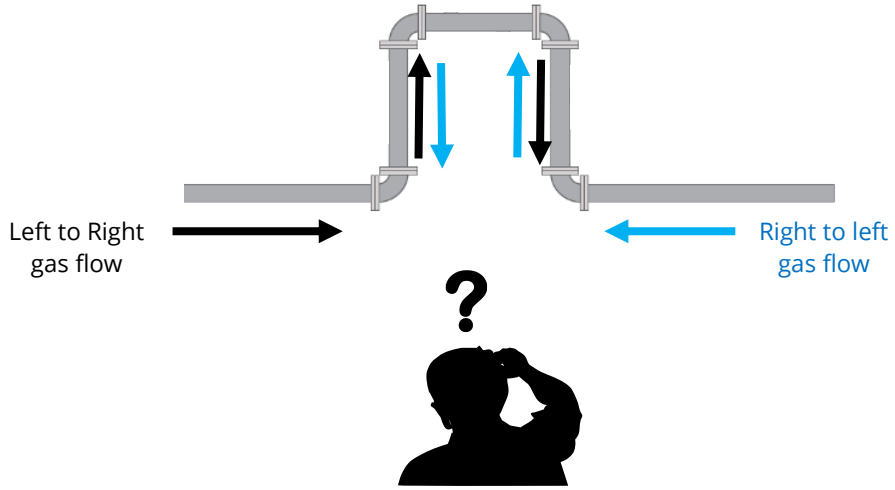
Compressed Air Alliance Pty Ltd
sales@compressedairalliance.com

Tips for buying a Flow Meter

Which way is the gas flowing?

When you are facing the pipe, which way is the gas flowing – (a) from the left to the right? Or (b) from the right to the left? The direction of gas flow matters if you want to see the display on the flow meter.

The insertion style flow meter can only be installed in one direction. If you get the direction of gas flow wrong, you can't rotate the flow meter 180° as this will result in inaccurate readings.

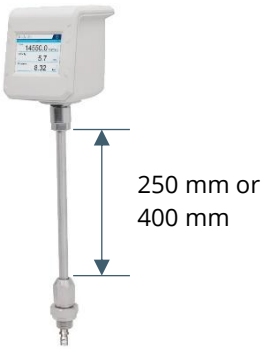


Display is facing the user.
This makes it easy to read the flow rate

Display is facing the roof.

Which shaft length should I get?

The insertion style flow meters come in two lengths - 250 mm shaft or 400 mm shaft. Which length you need depends on (a) pipe size PLUS (b) ball valve/ connection point length.



As shown in the picture below, the sensor tip must be in the centre of the pipe. If the sensor tip is too high or too low, your readings will be incorrect.

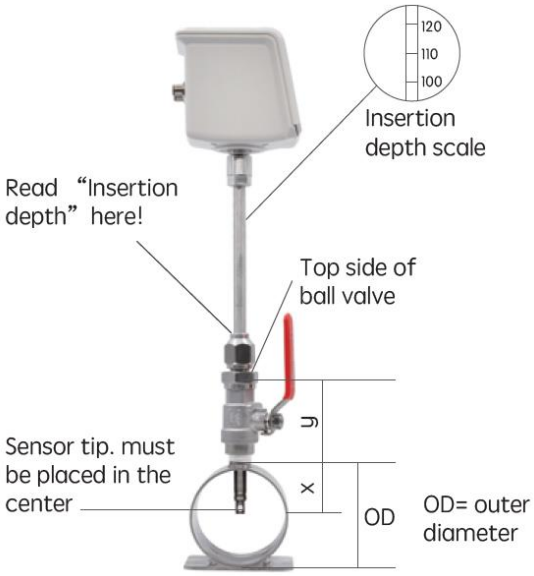
The formula to work out how long the shaft needs to be is:

$$\text{The Insertion Depth} = x + y = \frac{OD}{2} + y.$$

Where OD = outer diameter of pipe and Y = ball valve height.

The insertion depth must be less than the shaft length.

Eg, if the insertion depth is 137mm, then a 250mm shaft will be fine. If the insertion depth is 287mm, then the 400mm shaft is required. If the insertion depth is 230mm, then either shaft length will be fine (250 or 400 mm). **Tip**: make sure there is enough room above the pipe to install the flow meter.



Example

A flow meter is being installed in a cooper tube with a DN of 100.
This equates to an outer diameter (OD) of 100 mm.
The ball valve is 87 mm high.

The Insertion Depth = OD/2 + y
where y = height of the ball valve.

Therefore, the Insertion Depth =
100 mm / 2 + 87 mm = 50 mm + 87 mm = 137 mm.

In this example, a shaft length of 250 mmm would be OK.