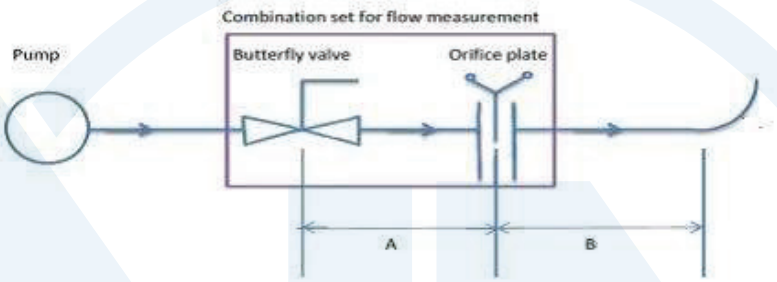
Installation of commissioning set

The metering station may be installed in any position, but preferably in horizontal position. In order not to impair the measuring accuracy by dirt particles, the pressure test points should not be located at the deepest point. When the orifice plate is installed in conjunction of butterfly valve, a minimum distance of 5 pipe diameters shall be maintained between orifice plate and regulating butterfly valve. Please note to have constant invariable flow readings it's recommended to maintain a straight pipe of 5 pipe diameters after the orifice plate in a pipeline.



A=5D (5 times the diameter of pipe) straight pipe without any intrusions
B = 5D (5 times the diameter of pipe) straight pipe without any intrusions

Flow measurement:

Method 1

The differential pressure manometer shall be fixed across the test ports on the orifice plate and is used to measure the differential pressure. The flow shall be obtained from the flow chart (Kv Value) of the orifice plate provided by the manufacturer.

Method 1

The differential pressure measurement probes are fixed to the test ports on the measuring instrument (PFM Flex) provided from the manufacturer. Enter the model number of the orifice plate along with the all details like pipe sizing and this instrument directly displays the flow in the selected unit of the flow rate.

Trust to have been of assistance to you with this information. Should you require any further clarification/information with regards to the above, please do not hesitate to contact us

Flow Measurement

The flow rate can be calculated using the Kvs value and a measured signal.

$$Kv = \frac{Q}{\sqrt{\Delta P}} \qquad Kvs = \frac{Q}{\sqrt{\Delta Ps}}$$

Where, Kv & Kvs = flow coefficient (m3/hr at 1 bar differential)
Q= flow rate (m3/hr)
ΔP= headloss attributable to valve (bar)
ΔPs = differential pressure across tappings (signal) (bar)