

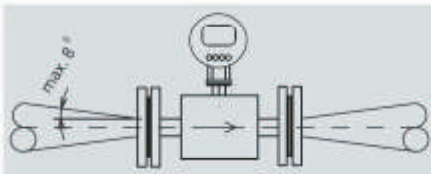
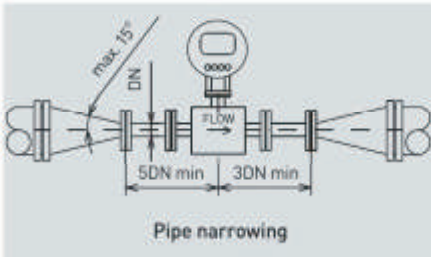
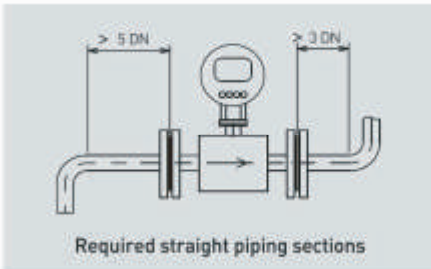
# INSTALLATION GUIDELINES

The meter performance will be the best if the liquid flow in the piping is well stabilized; therefore it is necessary to observe specific rules for the sensor placement in piping. In the contact planes between the sensor and the adjoining piping sections should be no edges as these would cause flow turbulence. Make sure that straight piping sections are provided before and after the sensor; their required length is proportional to the inner diameter of the piping concerned.

If more than one flow-disturbing elements such as pipe bend or fitting are located near the sensor, the required length of straight piping section on the sensor side should be multiplied by the quantity of such Elements.

Inner diameter of the connected pipeline must not be smaller than and should not be bigger than inner diameter of sensor.

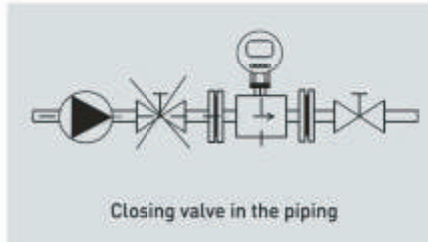
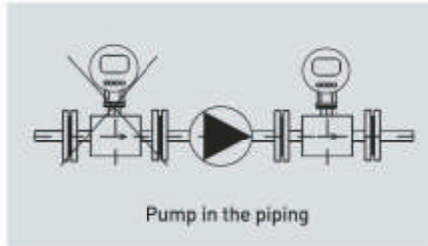
In the case of bi-directional flow, the same principles are valid before and after flow meter's body.



In the case where the pipeline nominal size is bigger than nominal size of flow meter, it is necessary to use conical reduction with the maximum slope 15°. In the case of bi-directional flow, conical reduction must be installed on both sides, both with minimum straight piping 5 DN.

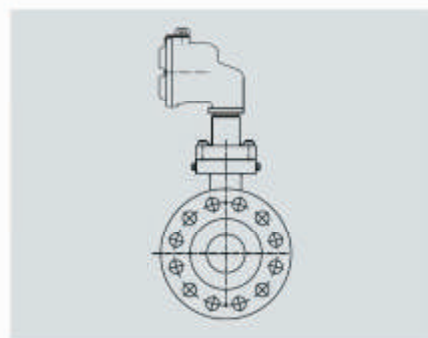
Pipe narrowing sections with angles not exceeding 8° can be taken for straight sections.

In the cases where the liquid is pumped, the flow sensor shall always be placed at the output side of the pump to prevent underpressure in the piping which might damage the sensor.



For the same reason, the sensor shall be always placed before the closing valve in the piping.

The sensor can be fitted in the piping in either horizontal or vertical position. However, make sure that the electrode axis is always horizontal and, if the sensor is mounted in a Horizontal position, the flange section.



## Must Do

- Measuring tube must be fully filled at all times
- Earthing Ring/Electrodes must be installed
- No exposure to direct sunlight, canopy is recommended.



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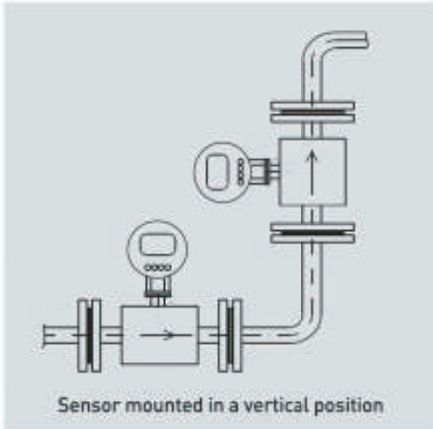
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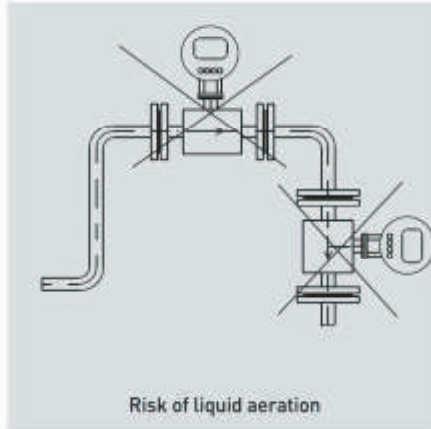
# INSTALLATION GUIDELINES



Sensor mounted in a vertical position

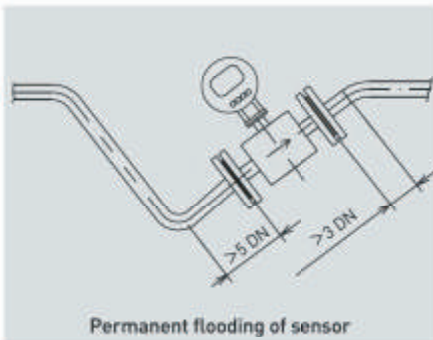
In the cases where the sensor is mounted in a vertical position, the flow direction shall always be upwards.

To ensure correct meter function at all times, the measured liquid shall completely fill up the sensor and no air bubbles shall be permitted to



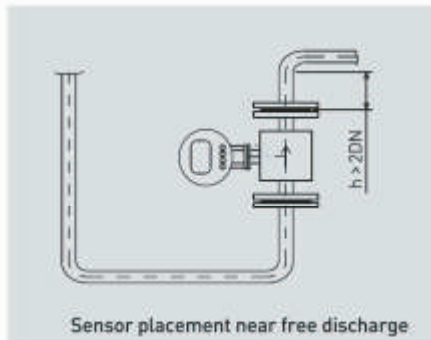
Risk of liquid aeration

accumulate or develop in the sensor tube. Therefore the sensor shall never be placed in the upper Pocket of the piping or in a vertical piping section where the flow direction is downwards.



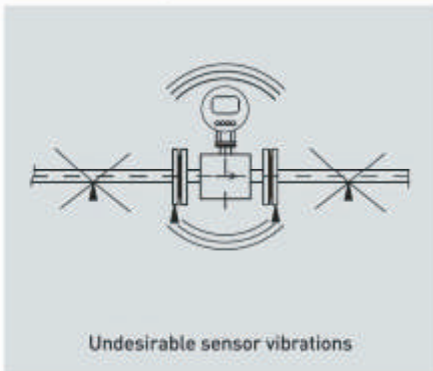
Permanent flooding of sensor

In piping systems where complete flooding of the piping cannot always be guaranteed, consider placing the sensor in a bottom pocket where full flooding is sure.



Sensor placement near free discharge

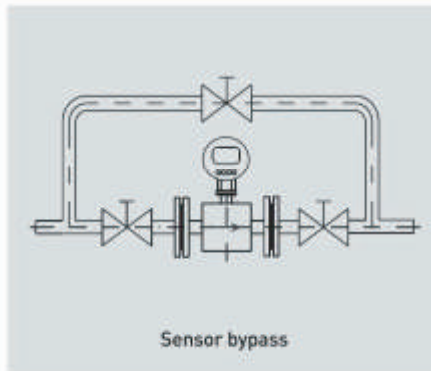
If the sensor is located near a free discharge point, such point shall be by at least 2 DN higher than the top part of the sensor.



Undesirable sensor vibrations

Make sure that the adjoining piping is clamped/supported as close to the sensor as possible, to prevent vibrations and damage to the sensor.

In applications where continuous liquid flow is essential a bypass shall be provided to allow



Sensor bypass

for sensor servicing. A Sensor bypass may be a also reasonable solution in the cases where, to dismantle the flow sensor from the piping. Liquid from a very long piping section would have to be discharged.



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