

INSTALLATION OPERATING MANUAL IRRIGATION WATER METER FLANGED

BEFORE INSTALLATION :

Pipe-line must be cleaned and free from residual of weldings, rubbish, shaving and every kind of extraneous materials.

Pipe-line must be perfectly aligned and their support properly dimensioned so that there's no external constraint.

Tighten the bolts in cross

Use the right bolt tightening so that the ends won't be damaged.

It's recommended to install a strainer before the water meter if there are some solid particles in the water.

Installation of the meters in the vicinity of pumps must be avoided. It is advisable to install the meter as far as possible from them.

Make sure all the water supply outlets, served by the meter, sit higher than the meter itself otherwise its metering precision could be altered. The highest position of the count itself as the recording of the counter may not be reliable. To address these possibilities, simply place the meter after a 'large upward curve that ensures always a pipe completely filled with water (Fig 1). This will prevent air bubbles that could affect the accuracy of measurement

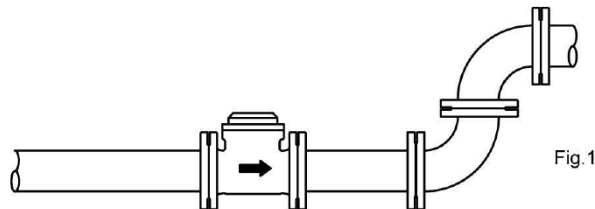


Fig. 1

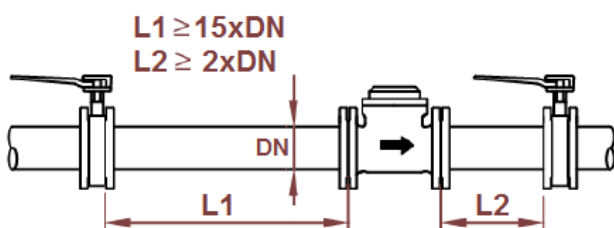
Respect the flow direction indicated by the arrow.

We recommend installing a valve downstream and one upstream of the meter in order to facilitate a possible maintenance of the meter itself, without having to drain the complete pipeline.

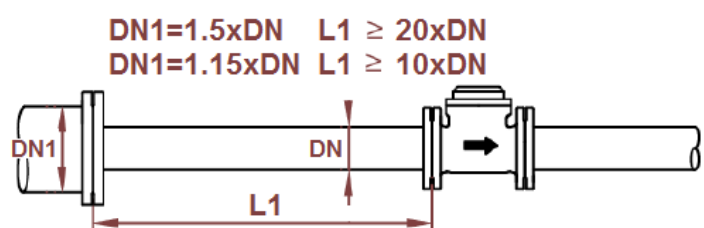
During the water meter commissioning it is advisable to open first the valve placed downstream of the meter (so to flood the mechanical part of the instrument) and then slowly open the valve located upstream of the meter. This will prevent possible water hammers or acceleration of the flow that could damage the moving parts of the instrument.

In the event of devices installed upstream of the water meter (gate valves, curves, elbows, tees, reducers, ...) it is recommended to follow the following points. These devices can generate flow turbulence that in the long run may damage the moving parts of the measuring instrument. The L1 and L2 lengths above are considered the minimum necessary. When possible, you should increase them.

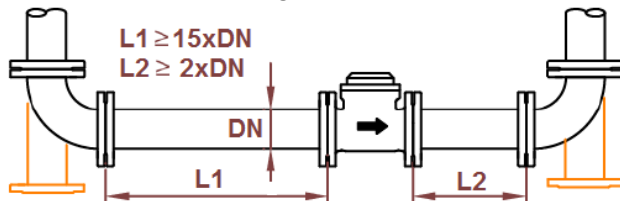
Valves placed upstream and downstream



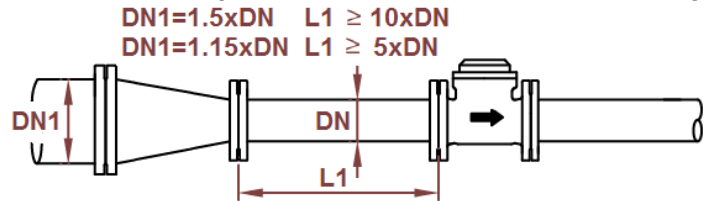
Upstream bottleneck



Curve or T fitting

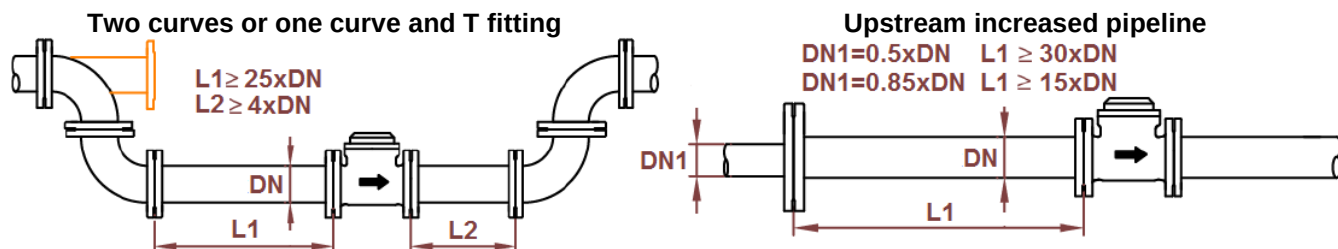


Upstream bottleneck with conical fitting

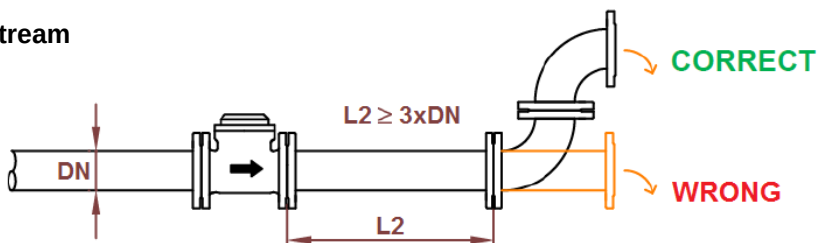


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INSTALLATION POSITIONS (SUITE) :



Free discharge downstream



TESTS :

During the tests under pressure, water meter must be removed to avoid overpressure risks.

INSTALLATION

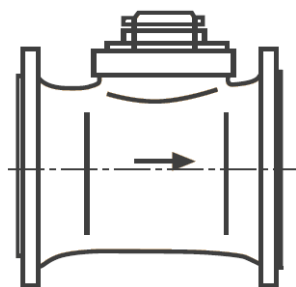
Please make the water flow slowly to avoid water hammer.
 The meter pit shall be protected from flooding, rainwater and frost.

INSTALLATION POSITIONS :

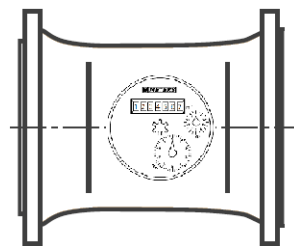
The counter should be normally placed in an horizontal position
 The counter can be installed vertically with ascending flow or tilted without suffering any damage.
 If necessary, the counter can be installed vertically with descending flow but the pipe should always be full of water in this case.

NOTE: Never install the water meter in horizontal position with totalizer in upside down orientation.

HORIZONTAL :



Class A



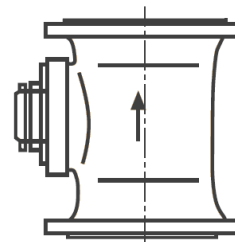
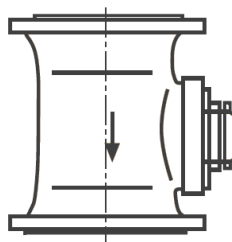
Class A
 (Vertical dial assimilated to vertical position)

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INSTALLATION POSITIONS :

VERTICAL* :

* : In vertical position,
the pipe should always be full of water.



Class A