



**AQUAMONIX**  
Measure. Monitor. Master.

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Technical Bulletin Series

# Magnetic Flow Meters

## Pit , Insert & Flanged Meter Install Guide

**TBWFP – 100**

ISSUE: V3  
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ECRO:

**Aquamonix Series 2030** flow meters provide a cost effective solution for irrigation metering and are fully Pattern Approved for Water NSW Non Urban Water Metering.

The Meters are Pattern Approved in all sizes up to 1500mm.

Meters must always operate full of water - ie the downstream bubbler or pit wall or other arrangement must ensure the meter operates in a fully submerged mode. (full of water)

The Meters are suitable for Pit or Insert Mount into a wide variety of installations often with minimal impact on existing infrastructure.



### General Installation Guidelines:

**Insert Meters** – Insert Meters are inserted into a pipe and are suitable for all outlets under gravity flows. For high velocity/pumped sites – the Insert Meter has a smaller ID than the pipework and may cause increased turbulence through the meter. For these sites we would advise use of a pit style meter which can provide smooth hydraulic flow conditions through the meter. Meters can be inserted into a range of pipework including concrete, plastic, fibre. Where insert meters are being considered for insert into steel pipes we recommend an air gap be maintained between the meter and the pipework to minimise risk of long term corrosion from different pipework materials and to remove risk of signal interference. For new Insert Meter sites – we recommend use of concrete pipe works for the housing of the insert meter.

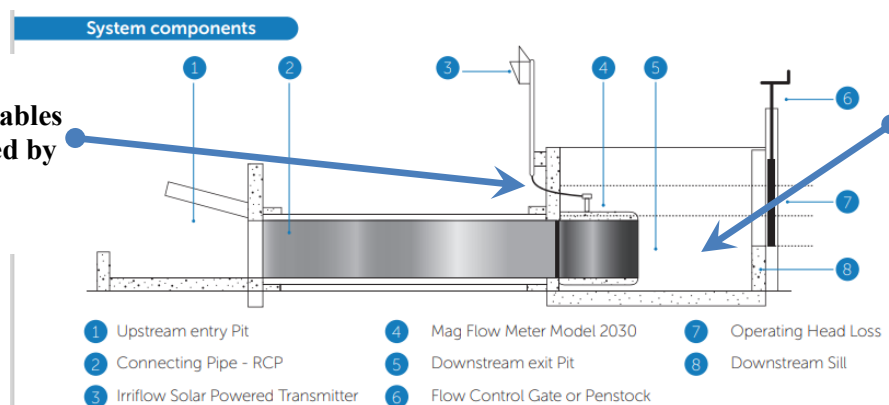
***Water velocity through an insert style meter should be designed for ideal range 0.5m/s- 2.5 m/s.***

**Pit Style Meters** – Pit Meters are mounted in a pit or structure at the inlet or outlet of a pipe run and are sized so that the ID of the Meter matches closely to the ID of the Pipework. The outlet area or pit arrangement should provide area for flows to exit the meter and not create additional turbulence. Pit Meters are suitable for all gravity flow sites and pumped flows. All cables should be run inside protective conduit to remove risk from fire/flood, vandals and animal attack.

***Water velocity through a Pit Style Meter should be designed for the ideal range 0.5m/s-4m/s.***

### Typical Pit or Bubbler Meter Layout with downstream outlet area

Ensure flowmeter cables are protected by conduit or similar



**This outlet area here should be at least as big as the Flow meter.**

**eg for a 900mm flow meter = allow an area at least 900mm clearance to pit walls**



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### Flanged Flow Meters - Series 1060, 2020 & 2060

These meters provide an industry standard fully flanged flow meter for any pumped, gravity or pressurized application and are fully Pattern Approved for Water NSW Non Urban Water Metering.

The Meters are suitable for Surface or Groundwater metering of clean or dirty water. All Irrigation Meters have internal earthing electrodes built into the meter and do not require additional earthing disks or straps.

The Meters are Pattern Approved in all sizes up to 1200mm.

Meters are suitable to operate in all pipework materials (steel, plastic, poly, cement, fibre) and must always operate full of water – diagram below shows typical installations.

The Meters are Pattern Approved to operate with zero pipework on the upstream and downstream side of the meter (open discharge or inlet). For practical applications we have always recommended that wherever possible a short run of straight pipe either side of the meter will be good practice. A pipe run of **5D** on the upstream side and **3D** where possible on the downstream will provide accurate performance well inside NMI requirements. Where these pipe runs are not possible, a shorter run of pipework can be used. Under our Pattern Approval – free discharge or Zero pipework on the downstream side of meter is widely used and approved under our PA and AS4747.



***Water Velocity through a flanged meter should be designed for the ideal range 0.25 m/s-5 m/s***



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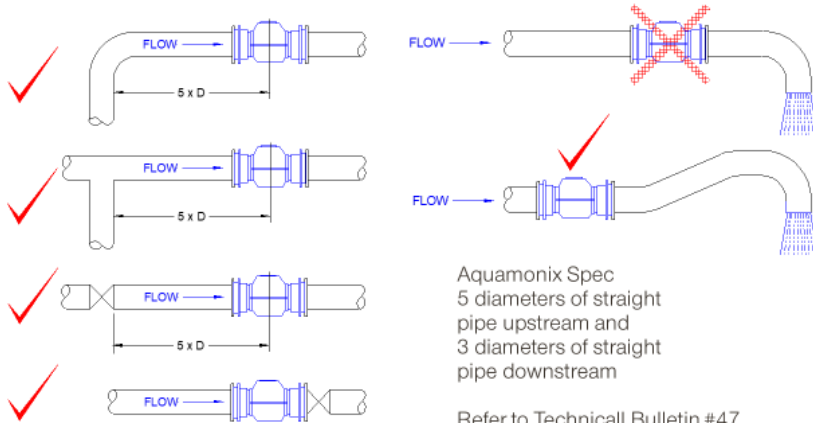
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Detector head must remain full during normal operation



**OPERATION AND CONFIGURATION MANUAL**



I500 ELECTROMAGNETIC FLOWMETER

*Further Details on Installation, Configuration, Operation are included in the various Manuals and Technical Bulletins available from Aquamonix – or from our Web site.*

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