

Meter Types

Fact Sheet

Northern Victoria
Irrigation Renewal Project

NVIRP
waterforgrowth

v.1

Electronic Flow Meter (Magflow)

What is an Electronic Flow Meter?

An electronic flow meter is a water meter which, together with a pipe and control gate or valve, is one of the options for replacing the Dethridge meter outlet. It allows a high flow of water to travel from the supply channel to the farm, with less head loss than the Dethridge meter outlet.

How does it work?

Electronic flow meters use advanced technologies to measure the flow rate and volume of water. They are powered by a solar-charged battery and can report flow rates and usage to the Goulburn-Murray Water office via a radio system. The flow rate and delivered volumes can be read by the irrigator on a display unit mounted on or beside the meter.

The control gate or valve regulates water entering or exiting the pipe. The gate can be on the Goulburn-Murray Water channel or the farm side of the outlet.

Electronic flow meter pipes are installed through the Goulburn-Murray Water channel bank so that the pipe will always run full. This allows accurate measurements to be obtained. Different pipe sizes are available depending on the site requirements.

Advantages:

- low head loss compared with a Dethridge meter delivering equivalent volume
- more accurate measurement than the Dethridge Wheel
- high flow rates available
- can be manually or automatically controlled
- flow rate and volume can be viewed at the meter
- no moving parts that may allow flow to be obstructed and less likely to be obstructed by rubbish than a Dethridge meter
- unrestricted access along the channel bank
- can provide a link to other technologies such as soil moisture monitoring and on-farm irrigation automation.

Disadvantages:

- manual version requires the irrigator to operate the outlet
- requires a technician to service the outlet
- no visible indication of flow rate other than a read-out on the display.



A 450 mm magflow meter, which can be operated automatically or manually



Foreground: FlumeGate™ meter
Background: 375 mm Magflow meter

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