



1. Purpose

To test, measure and characterize the accuracy of GMAG100 reading. GMAG100 is a 4 GPM nominal flow rate magmeter.

2. Method

By weight. Certain volume (about 30 liters) passes through the magmeter, has been collected in a container and weighed. A GFC110 flow computer counts the pulses from the GMAG100 pulse output.

3. Equipment used

3.1. Scale

A scale calibrated to under 0.01% has been used

3.2. Counter

GFC110 counts the pulses from the magmeter's isolated pulse output and shows them on its LC display.

3.3. Valve

Special care was taken for precisely starting and stopping the flow. A fast knife valve has been used.

3.4. Estimated error from the equipment

The estimated error from the measurement equipment is under 0.05%, we believe it was under 0.03%

4. Liquid

Clean tap water.

5. Conductivity of the liquid

About 70 uS/cm

6. Ambient temperature

About 25 °C

6. Test Results

All the tests were with a flow of about 1.8 GPM

<i>Test #</i>	<i>Pulses Measured</i>	<i>Had to be Pulses</i>	<i>Error [% of rate]</i>
1	20083	20077	0.03
2	20195	20190	0.02
3	19986	19989	-0.02
4	20088	20081	0.03
5	20203	20197	0.03
6	20337	20327	0.05
7	20186	20187	0.00
8	20103	20095	0.04
9	20257	20264	-0.03
10	20278	20280	-0.01

Average Error: 0.014