

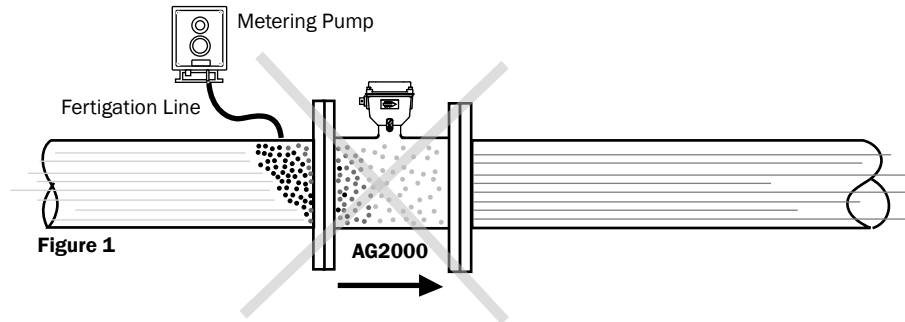
General. Magmeters are designed to measure the flow of fluids with conductivity greater than 20 microSiemens. For best accuracy, the conductivity of the fluid as it passes through the meter must remain uniform. Wide variations in conductivity result in “noise” or jumpy readings, resulting in inaccurate flow rates and totals.

Fertigation or Chemical Injection Applications. When water alternates with unmixed fertilizer or other chemical passing through the magmeter, conductivity may vary widely (Figure 1). This causes sudden spikes and drops in the meter’s reading. The resulting flow rate and total readings will be “noisy” and inaccurate. This limitation is inherent in the technology itself and is therefore true of all magmeters, regardless of manufacturer or style of magmeter (spool or insertion).

The problem can be entirely eliminated by proper placement of the fertigation/chemical injection line relative to the position of the magmeter. The goal is to have fluid of uniform conductivity passing through the meter. This can be accomplished by placing the fertigation line downstream of the meter (Figure 2), or far enough upstream of the meter that complete mixing will occur before the fluid reaches the meter (Figure 3). The upstream distance required is influenced by many variables including chemical, concentration, piping configuration and fluid characteristics. In most applications 50 pipe diameters upstream should be sufficient to allow mixing to occur.

IMPROPER INSTALLATION

Results: Inaccurate Readings



CORRECT INSTALLATION

Results: Accurate Readings

