

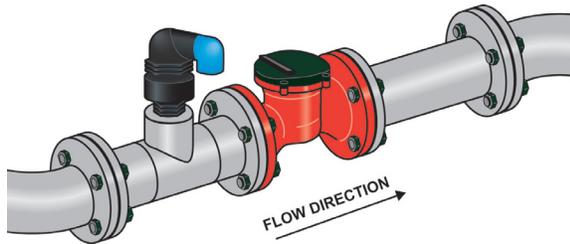
MAY 2015

This month's edition of Netafim TechTALK focuses on Water Meters.

When choosing a water meter for your project, do you consider the effects that air will have on the meter's reading? We aren't talking about static exposure to air, rather air mixed with the water supply. With a few exceptions, most water meters can't tell the difference between water and air moving through the pipeline, and when air is present, it is recorded as water. Because air travels through a pipeline faster than water, surging can occur and significant errors can be recorded on the meter. Surges of air can cause other problems as well. When water spins the impeller of a mechanical meter, it lubricates and cools it. When air spins the impeller, it heats and damages it. If the spinning element is made of plastic, it may even melt.



What if you have to pay for your water or have a limited supply? Would you like to pay for air in your fuel? Or what about those no-free-refill fountain drinks at the theater - wouldn't you rather let the foam settle and finish filling your cup? Now if you don't have to pay for your water, or you're not under any type of restriction, you may not care. Knowing the water flow in your network isn't just for financial peace of mind, it's also a health check on your system and your crop. A decrease in flow over a period of time could indicate clogging in your emission devices, and on the flip side a sudden increase in flow could indicate a break in the network.



Some manufacturers suggest installing their meters in different orientations to mitigate the effects that air (or a partially full pipe) will have on the meter's reading, but Netafim maintains a different viewpoint. We encourage our users to remove the air from their system before it comes in contact with the meter (mechanical or electronic). After all, isn't measuring water (not air) the whole point?

So which meters are more susceptible to *aironeous* readings (pun intended)? As with other mechanical meters, Netafim mechanical meters can't tell the difference between water and air, so air will be recorded. However, our ultrasonic meters can tell the difference. Rather than record the air, they alert the user to the problem so that it can be addressed. Now you might be thinking, 'isn't that a defect in your ultrasonic meter'? We say 'no, no it isn't'. With the drought issues plaguing more parts of the country, it is becoming more important than ever to measure every drop of water and work toward sustainability.

So how do you get rid of the air in your system? The answer is with properly sized and placed air relief vents. You need air vents that can release air during pipe fill up AND while under pressure. However even air vents at every turn may not be sufficient. If you have soda water (high concentrations of air mixed with water), you may need to place an air vent near the end of a long, straight section of pipe. This will allow the air time to separate and move to the top of the pipe where it can be collected and released. When your pipe diameter is larger than your air vent, it may be beneficial to place a tee and concentric reducer between your pipeline and air vent, thereby creating a large pocket at the top of your pipeline for the air to collect.



In long horizontal pipe sections, air bubbles collect at the crown of the pipe, forming air pockets and causing obstructions.

Proper air relief won't just benefit the accuracy of your water meter but also the health and efficiency of your system. As always, we encourage you to discuss your needs and concerns with a Netafim representative. Installation guidelines for Netafim air vents and water meters can be found on our website, www.netafimusa.com.

If you have a suggestion for a future topic, we'd love to hear from you. Please e-mail your idea to us.communications@netafim.com. Thank you.