

## Waste Water Aeration Air Flow Meter

### Applications:

- Wastewater Aeration
- Water Treatment Aeration
- Air Flow Meters
- Aeration Air Flow Meters
- Municipal Waste Water Treatment

### Application Background:

The most common and preferred process for treating water and wastewater is through aeration. By introducing air either by forced compression means (air compressors or blowers) or by mechanical means (paddle wheels, propellers, blades, or brushes) or both, the process encourages the natural microbial degradation of organic matter. Interestingly the cost of generating the air supply represents more than 50% of the energy usage at a typical waste treatment plant far exceeding that for pumping the waste itself. Thus any means for monitoring and improving the efficiency and effectiveness of air usage could significantly reduce the cost of plant operations.

### Application Solution:

There are many techniques for monitoring aeration air flow in a waste water treatment application. Historically, differential pressure orifice plates, vortex shedding, and turbine flow meters have been used. Problems inherent with these technologies such as wear on the plates, bearings, and blades and blockage in the sensing elements have sent engineers looking for a better approach. Today you will find the preferred technique to be a thermal based mass flow meter. A simple single pipe penetration insertion meter, with accuracy and repeatable air measurement over the broad range is seen to be the ideal solution for the wastewater aeration air monitor need.

Delta M now offers its VersaMassTer, VM7000, series air thermal mass flow meter to meet the needs in this wastewater aeration application. This simple to install insertion sensor has no moving parts or orifices to clog for maintenance free operation. The meter can be mounted with local electronics, color display, and thru-the window control keypad or remotely to a control panel box or control room. The data displayed or available through Modbus RTU via RS485 show current flow rate, cumulative total flow, and temperature. For a Repeatable, Reliable, and Ready solution for your aeration air flow meter needs give Delta M a try. You will not be disappointed.

For full details go to our website, [www.deltamcorp.com](http://www.deltamcorp.com) to the products tab and look for the VersaMassTer, VM7000.