WASTEWATER TREATMENT AND WATER TREATMENT

Monitor Aeration Flow, Digester Gas or Oxygen and Ozone Flow

WASTEWATER TREATMENT

Aeration Flow Monitoring

The use of compressed air is necessary to oxygenate the aeration basins to assist in the process of breaking down municipal waste. While a dissolved oxygen meter (DO meter) provides the primary signal to assure that conditions are optimal for bacterial growth, it is the air flow that provides the oxygen that controls the environment. Older systems manually inject air through drop lines into the basins, but do not control the amount of air pumped into the basins, causing great inefficiencies. By monitoring the air flow with a Sage Flow Meter, rather than the traditional positive displacement meter, associated pressure drop is eliminated and a direct mass flow output signal is provided. This fast responding signal can serve as feedback control in automating the process of maintaining the proper DO level, resulting in energy savings as much as 30%.

Digester Gas Flow Monitoring

Downstream of the aeration basins, a secondary process occurs where digesters further break down the waste. The environment consists of digester gas (typically 65% CH4 and 35% CO2); here the mass flow rate must be constantly monitored so that an overall system balance is maintained. Older systems consist of maintenance-intensive positive displacement meters that require temperature and pressure corrections. Our flow meters measure the mass flow directly, have negligible pressure drop, fast response, and low-end sensitivity to handle the low velocities associated with digester gas. They are easy to install, insensitive to contamination, and easily cleanable.

WATER TREATMENT

Oxygen and Ozone Flow Monitoring

Modern Water Treatment Systems use ozone, rather than chemicals (such as chlorine) to purify water. These systems have less environmental insult and are more efficient. The systems that generate the ozone require an accurate mass flow meter to monitor the oxygen, and in some cases need the oxygen/ozone mix monitored as well. The Sage in-line thermal mass flow meter (or insertion, for larger systems), is ideal for this application, and can be calibrated for either oxygen or the known ozone mix.

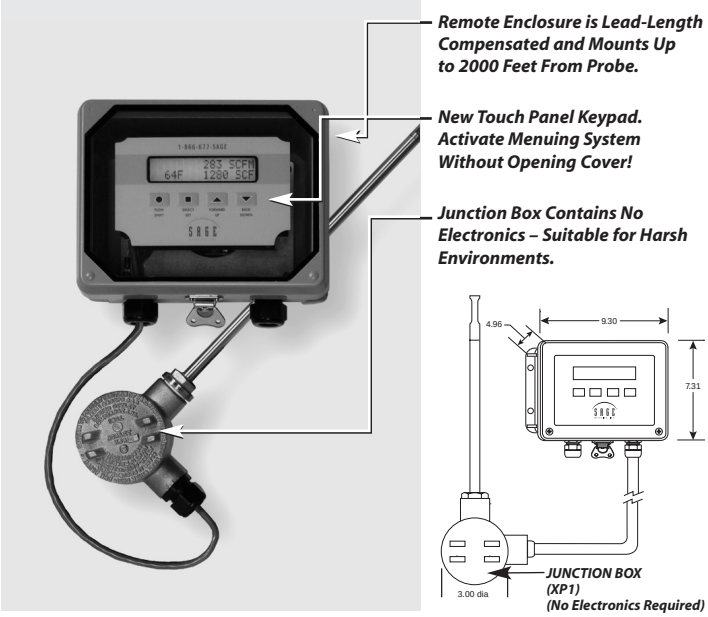
THERMAL MASS FLOW METERS

Sage Metering is your source for monitoring, measuring and controlling the gas mass flow in your municipal or industrial process. Our high performance, NIST traceable, thermal mass flow meters will help comply with environmental regulations, increase productivity, reduce energy costs, and maximize product yields. With over 70 years of combined experience in delivering quality in-line and insertion thermal mass flow meters for a wide variety of municipal and industrial needs, the Sage Metering management team is dedicated to providing you with the performance and customer support that you deserve.

Sage Thermal Mass Flow Meters are designed for high performance mass flow measurement of flow rate and consumption of gases such as air, oxygen, landfill gas, digester gas, bio gas and other gases and gas mixes. They are field rangeable and have a convenient user interface.

Sage Metering has distinguished itself by offering a higher standard – our mass flow meter output is virtually independent of even large process temperature variations, and our digital electronics is impervious to external analog noise. In addition, our meters feature a back-lit display that reports mass flow or velocity, totalized mass flow, and temperature. Isolated 4-20 ma outputs for mass flow and/or temperature, relays, and a convenient RS232 and keypad user-interface, gives you the flexibility to integrate the functions of flow measurement with your specific needs.

See Sage Metering product brochure for additional information and product benefits or contact us at 866-677-7243 for application assistance.



HOW DOES THERMAL MASS FLOW MEASUREMENT BENEFIT YOU?

- Direct Mass Flow – No need for separate temperature or pressure transmitters
- High Accuracy and Repeatability – Precision measurement and optimal control of your process
- Rangeable over 100:1 Turndown (1000:1 with multiple calibrations) – Accommodates the extremes of your process with one instrument
- Low-End Sensitivity – Detects leaks, and measures flow, even on start-up
- Negligible Pressure Drop – Will not impede the flow nor waste energy
- No Moving Parts – Eliminates costly bearing replacements, and prevents undetected accuracy shifts
- Dirt Insensitive – Provides sustained performance

WHAT ARE THE BENEFITS THAT SAGE THERMAL MASS FLOW METERS OFFER YOU?

- ***New:*** Verify sensor cleanliness and validate calibration with self-check routine
- ***New:*** *Touch Screen Technology.* The cover does not need to be removed to access Menuing System
- ***New:*** *Lead-Length Compensation.* Remote electronics up to 2000 ft from probe
- ***New:*** Probe Junction Box requires no electronics. Suitable for harsh environments
- Available with up to four totally independent calibations (four different gases, sensitivities, or configurations). Channels A–D selectable by keypad, laptop or external switch closure
- Powerful state-of-the-art microprocessor technology designed for high performance mass flow measurement, and field rangeability
- Proprietary sensor drive circuit provides enhanced signal stability and is unaffected by process temperature changes
- Menu driven user configurability, including full scale setting, units of measure, pipe area, channel selection, pulsed outputs of total, and diagnostics
- Easy to read 2-line back-lit flow rate/totalizer and temperature display. Also serves as dialog window for menu selection of user options
- RS232 PC interface and free Sage VIP software – easy to use
- Ease of installation, and convenient mounting hardware
- Flow conditioning built in to large flow meters (3/4" and up)

Sage Metering, Inc. / 8 Harris Court / Bldg D-1 / Monterey, CA 93940 / 866-677-SAGE (7243) / 831-242-2030 / Fax 831-655-4965 / www.sagemetering.com

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