

THE PROBLEM

Continuous monitoring of water quality is often impractical and prohibitively expensive. Treatment frequently consists of the injection of chemicals at a regulated rate.

This works well in closed loop systems where treatment rates are consistent, or open loop systems where flow rates are consistent. However, with open loops with inconsistent flow rates this approach can be inefficient resulting in wasted chemicals and unpredictable residuals.

At times of low flow, a fixed injection rate can result in over treatment. This results in wasted chemicals. At times of peak flow, an insufficient amount of chemicals would be injected. This would not effectively treat the water.

THE SOLUTION

In open loop systems where the inlet water quality is relatively stable and flow rate is variable, a method of treatment that injects chemicals proportional to flow rate can be more accurate. This can also be more reliable and cost effective than one based on fixed interval injections.

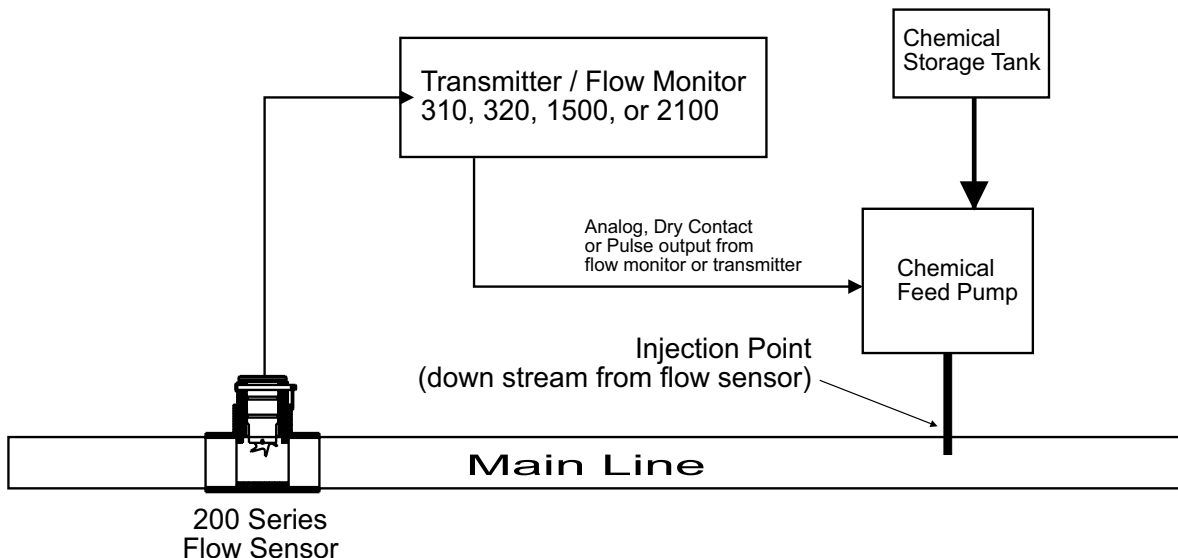
Badger Meter's flow metering system can provide the flow data and control required for injections based on flow rate. When a display of flow rate and/or total is desired either our Series 2100

or Badger® Series 1500 Flow Monitors provide excellent choices. When no display is required our Models 310 or 320 analog or pulse transmitters provide very cost effective control. All the above products are compatible with any Badger Meter Flow Sensor. These very flexible products can control based on flow in pipe sizes as small as ½" to over 36". With this system total flow can be monitored and displayed. The Series 2100 can be programmed to activate a chemical injection at a designated interval such as once per every 100 gallons or liters, etc. The digital LCD display provides continuous indication of flow total, rate, and optional relay status.

Contact Badger Meter for assistance in choosing the best hardware for each specific application.

EXAMPLES OF CONTROL

- Low flow lockout with time delay and dead band
- High flow lockout with time delay, dead band, and latching
- Open collector, solid state, or relay dry contact pulse per volume for stroke type positive displacement chemical feed pumps
- Analog output (0-1VDC, 0-5VDC, 0-10VDC, or 4-20mA) for VFD driven injection systems



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