Technical Information:

Date: October 2006
Subject: Chlorine Sensors – Buffer & Reagent Free
Topic : Buffer and Reagent Free Chlorine Measurement

The Free Chlorine (CLE) and Total Chlorine (CTE) sensors are Amperometric sensors which use a membrane cap and electrolyte.

There are no buffers or no reagents required to be added to the sample line in order for the sensors to measure the Free or Total Chlorine value in the water.

This is a big advantage of using a membrane style sensor where the electrochemical reaction takes place under controlled conditions behind a membrane cap. The Chlorine measurement is direct and continuous.

There is no need for any special sample water disposal requirements since there is nothing added to the water.

Free Chlorine Sensors use a hydrophobic membrane which is filled with 2 ml of electrolyte.

Total Chlorine sensors use a hydrophilic membrane which is filled with 4 ml of electrolyte.

A zero point calibration is not necessary as the sensors have a stable zero point, the calibration is normally done by doing a DPD test and entering the value to the unit, it can be calibrated real time on line.

The membrane cap and electrolyte will periodically have to be replaced the frequency dependent on water quality but typically 6 months to a year or longer is typical.

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