

## Free Residual Chlorine Recorder

An on-line Chlorine Recorder shall be provided to continuously measure free chlorine residual at the \_\_\_\_\_ (Specify Location) \_\_\_\_\_. Each Free Chlorine Recorder System shall consist of a direct measuring chlorine sensor, a clear constant-head sensor flowcell , 25 feet of sensor interconnect cable with a quick disconnect plug, and a 10 inch circular chart recorder with integral sensor amplifier and suitable for either wall or panel mounting.

The chlorine sensor shall be a direct measuring polarographic sensor utilizing a special polymeric membrane to isolate the sensing electrodes from the sample and eliminate the potential for electrode contamination. The membrane shall allow free residual chlorine to diffuse into the sensor where it will react with the sensing electrode, generating a signal that is linearly proportional to free chlorine concentration. The sensor assembly shall also contain an RTD temperature sensor to continuously measure sample temperature and apply compensation to the measured chlorine value. The chlorine sensor shall be constructed with a quick disconnect receptacle to allow for easy sensor servicing or exchange. Chlorine sensors shall be supplied complete with at least 10 spare membranes, a bottle of electrolyte and a spare parts kit that includes all o-rings and special hardware.

The sensor flowcell assembly supplied with the recording-monitor shall be constructed of clear material allowing the condition of the sensor membrane to be inspected without removal of the sensor. The sensor shall slide easily into the side of the flowcell, with a double o-ring seal to prevent water leakage. Flow to the sensor shall be regulated automatically through a constant-head overflow arrangement. Hose barbs for sample inlet (1/4" I.D. tubing) and drain (1/2" I.D. tubing) shall be supplied as part of the flowcell.

The Free Chlorine Recording-Monitor shall provide a 10 inch circular chart, for the purpose of continuously recording chlorine concentration and with a scale of 0-100 % representing the selected measuring range. The Chlorine Recording-Monitor shall be housed in a NEMA 3 enclosure with a circular glass viewing window. An LCD display shall be provided to directly display chlorine concentration and is to be visible without opening the door of the recorder. The chart speed shall be selectable for either 24-hour or 7-day and the measuring ranges to be adjustable from 0-5 PPM or 0-20 PPM programmable through the front programming keypad. A box of 25 chart papers shall be provided scaled 0-100% with one side for 24 hour rotation and the other for 7 day rotation.

The complete Residual Chlorine Recording-Monitor shall be Series B20/62 as manufactured by Analytical Technology, Inc. or approved equal.