



Closed Loop Systems are designed to supply either hot or chilled water to a heat exchanger, and then return the water to the point of origin to repeat the process. Regardless of how the system is designed, the following characteristics apply. Because it is a Closed Loop, no or only minimal losses are expected as there is no evaporation occurring.

Corrosion is the most common problem in closed loops, even though scaling can be a problem in very high temperature water. The effects of corrosion will be higher as the temperature of the water increases, which means more treatment chemicals will be required to retard the effects of corrosion. (Hot water closed recirculating loops will require more treatment chemicals in comparison to chilled closed loops.)

While these systems are designed to not lose water, they often do. For example, a leak occurring at the recirculation pump that goes un-repaired, at a rate of 1-oz/minute loss of water in a 3000 gallon system adds up. Over a 1 year time period, it amounts to over 4100 gallons/year loss, (or more than the entire system volume). Each gallon of water going into the system needs to be treated.

CE WATER will engineer an application-specific treatment program, designed to optimize corrosion protection, which will prolong the lifespan of system piping. We offer several different products, to match the specific needs of your system, metallurgies, water quality & process requirements. **CE WATER** will also recommend specific filtration products to enhance performance and maximize heat transfer efficiencies.

CE WATER Closed Loop: Treatment

Closed Loop Systems are designed to supply either hot or chilled water to a heat exchanger, and then return the water to the point of origin to repeat the process. Regardless of how the system is designed, it will need the following protection.

Corrosion Protection: **CE WATER** offers a comprehensive line of closed loop treatments that give you a sure defense against closed loop corrosion, fouling and microbiological growth. Our product line includes a wide array of corrosion inhibitors to prevent corrosion to all system metals, including ferric and yellow metal components.

Microbiological Control: Even though the system is closed, microbiological attack can occur. **CE WATER's** closed loop biocides control bacteria populations, including aerobic bacteria and anaerobes like sulfate reducing bacteria (SRB).



Filtration: Filtration of closed loops can enhance performance, reduce chemical consumption and reduce periodic maintenance by removing impurities from the system. Filtration systems can be either full-flow or side-stream, (which can reduce the cost of filtration equipment). **CE WATER** offers a variety of application-specific filtration options, including a complete line of filtration equipment for closed loops, including bag and cartridge filter housings and replacement media. (Bags & cartridges capable of removing particles down to less than 0.5 microns are also available.)

Notice

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