

**SofTek<sub>tm</sub> and SSBrom<sub>tm</sub>**  
**Innovative Technologies To**  
**Save Water – Eliminate Scale**  
**Reduce Water and Energy Costs**  
**Stop Use of Toxic Chemicals**

MB0411



A 500 ton thermal load operated at 3 cycles of concentration (COC) will blowdown to sewer 2,422,688 gallons per year.

Converting this system to a patented\* SofTek water treatment program increases COC to 8, reducing blowdown to just 692,196 gallons per year saving:

**1,730,492 gallons of water per year**

**Reduce Water and Sewer Costs**

You pay for every gallon of cooling tower blowdown twice, once when you buy the water, second when blowdown is discharged to the sewer. On a 500 ton thermal load going from 3 COC to an 8 COC SofTek water treatment program reduces water purchases by 23.8% and blowdown by 71.4%.

Do you currently have hard water scale problems? Is scale in your condensers increasing your energy bills? Did you know that just 0.015 inch of scale increases chiller energy use by 12.5%, which on a 500 ton thermal load increases the energy bill by over \$36,000 per year?

**Eliminate scale, save big energy cost \$**



Scale Free Cooling Tower Basin

**SofTek** is the only water treatment program which totally eliminates hard water scale formation.

**SofTek** is the use of softened makeup water combined with a specialized corrosion inhibitor program to make normally highly corrosive cycled soft water less corrosive than cycled hard water.

## Stop Use of Toxic Chemicals

Toxic chemicals, biocides, are used to control growth of algae, bacteria, fungi, and mold in cooling tower systems. Side stream production of electrolytic bromine by the **SSBrom** unit controls the unwanted growth of microorganisms in the cooling tower without addition of any toxic chemicals.



ProChemTech developed and patented\* the **SSBrom** as a safe, cost effective means for making aqueous electrolytic bromine using the cooling water as a reactant. Sufficient chloride and bromide ion are present in highly cycled cooling water for the direct electrical current in the SSBrom cell to produce enough electrolytic bromine to control microbiological growth in cooling towers. Shown in the picture is a frame mounted **SSBrom** power supply with its sidestream electrolytic cell.

### Green Advantages

- Electrolytic bromine degrades back to harmless bromide ion, no toxic chemical residue in the cooling tower blowdown.
- Electrolytic bromine is produced within a sidestream of the cooling water only when desired, no risk of accidental spills of any chemicals during transport, in inventory, or during use.
- USEPA registered, SSBrom units are produced in USEPA registered facilities, USEPA #58616-PA-1 and 58616-AZ-1.
- **SSBrom** halogen chemistry is effective against Legionella bacteria.
- Water management programs using the **SSBrom** for microbiological control have only one chemical feed, the scale/corrosion inhibitor!
- The **SSBrom** can be used on systems from 10 to 100,000 gallons water volume.

**Application Note:** The **SSBrom** can only be used when the cooling tower is being operated with a soft water makeup, **SofTek**, cooling water management program.

We provide complete **SofTek** and **SSBrom** packages: softeners, control equipment, and soft water chemistry: everything from one supplier, for any size or use cooling tower.

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“Innovation in Water Management”

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\* SofTek US Patent 7,595,000 SSBrom US patent 7,927,470