

Cooling Towers, Closed Loop Steam Boilers, & **Commercial Dish Machines**

NO WASTE • NO BACKWASHING • NO ELECTRICITY • NO CHEMICALS

Important Information for Applications Typically Treated by Professional Chemical Suppliers

Next ScaleStop TAC is a scale prevention technology that does not require chemicals such as sodium, potassium, acids, or phosphates to produce a scale-free effect in water distributions systems and especially water heating equipment. Next-ScaleStop is a "physical water treatment" (PWT) and does not extract or sequester the water hardness constituents of calcium and magnesium, but rather consistently influences the crystal structures of these minerals in such a manner that minimal or no scale is formed on interior surfaces. Next-ScaleStop neither adds chemicals nor removes chemicals from the water. Furthermore, the addition of chemicals will likely interfere with the efficacy of ScaleStop.

To be more specific, rather than attempting to prevent the natural tendency of hard water to form scale (by removing or adding chemicals), ScaleStop treatment actually promotes and redirects scale formation at the molecular level such that the scale remains suspended in the water rather than forming on surfaces within the water system.

When ScaleStop TAC technology is used to treat water at the point of entry (POE) of a commercial building, it is important to realize that chemical using applications within the facility may be incompatible with the TAC treated water. For example, in cooling towers and closed loop steam boilers, the chemical treatment services often use crystal modifiers such as Phosphonates and Polymers. Phosphonates are intended to inhibit scale formation by being adsorbed onto active crystal sites where they arrest growth. Polymers distort whatever crystals are formed and inhibit their aggregation by incorporating large and irregular shapes into the crystal structure. In each case the chemicals used interfere with the benefits created by the TAC water treatment upstream.

Commercial Dishwashing chemicals can also prevent the TAC technology from working as described above. Chemical suppliers have developed treatment recommendations based on simple water tests done on site. These simple water tests do not take into account how the TAC technology works. This can leave the machine and the dishes with a film of minerals, excess detergent or a combination of both. Often chemical suppliers will recommend using an ion exchange water softener that will provide water that is compatible with their preferred chemicals. Some of the best chemical suppliers take the time to understand TAC technology and provide chemistry that is compatible with the TAC treatment. The result is cleaner dish machines and dishware as well as a more environmentally friendly treatment solution.

One of the greatest benefits of the ScaleStop TAC technology is the prevention of scale without wasting any water or discharging any chemicals into the environment. However, as explained above, when chemicals are added to applications downstream of a TAC system, the performance may be negatively affected beyond the control of the TAC supplier. For this reason we strongly recommend that you communicate with the chemistry suppliers clearly in regards to water treatment issues. If they have experience with TAC and take full responsibility for the results in applications which use their chemicals, then no action is recommended except verifying customer satisfaction. Alternatively the property owner can install Point of Use (POU) ion exchange water softeners before dish machines and use any chemicals the supplier recommends.

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