

PROTECT

**Your Food
Service
Equipment
From Lime
Scale and
Corrosion
Without The
Use Of Harsh
Aggressive
Chemicals...**



Service calls to repair water-using food service equipment plague the industry. A proper preventive maintenance program will ensure a more trouble-free operation of this equipment. Such a program will pay for itself over and over again by reducing costs, downtime and increasing profit margins.

The majority of service calls on ice machines, dishwashers, coffee makers, steamers, etc. are water related and can most often be prevented with a properly sized and installed Superior Water Treatment System.

Minerals in water are naturally in solution; however, when water temperatures change they precipitate in the form of a hard, brittle scale that collects in the piping and on heat-transfer surfaces.

This insulating scale build-up reduces the efficiency of equipment, increases energy requirements, and requires downtime for additional maintenance.

Maintaining scale-free surfaces assures optimum heat-transfer coefficients, enabling the maximum utilization of food service equipment while reducing loss of business due to downtime.

The Superior Water Conditioner[®] is designed to prevent lime/scale and can be a solution to these problems.

When installed in-line, this unique piece of equipment will cause minerals to remain in suspension throughout the heat transfer process. Instead of bonding together and forming scale they will flow through or settle at the low points of a system in a purgable form. The solids can then be easily removed by opening a drain at the bottom of the equipment.

There are several different types of water-using food service equipment in which the Superior Water Conditioner[®] can be used to control lime/scale build-up.



Since 1964

U.S. and Foreign Patents

ICE MACHINES



There are many different makes and models of ice machines that make ice, ice flakes, or ice snow; but their operation principles are all basically the same.

A malfunctioning solenoid valve is very common in ice cube machines. Either the valve will stick open or closed. Scale will also build up on the evaporation sheet which will reduce efficiency. The minerals in the water may also produce “cloudy” ice.

On ice flake equipment, most problems are caused by scale formation on the auger.

Sizing & Location: Hold the float valve wide open and take an actual measurement to determine maximum flow rate. Install the Superior Water Conditioner® vertically in the raw water make-up line (sized to treat 100% of the water) as close to the equipment being treated as possible. On water cooled machines, install the unit before the line tees and add the amount of water used to cool the condenser for the total GPM's needed. When two separate lines are used, a second Superior unit will be needed to condition each of the two feed lines.

DISHWASHERS

Hard water creates a variety of problems in washing equipment as the heating element or steam heat exchange tubes in a 180°F booster can become insulated with scale. This will result in an inefficient transfer of heat and an eventual burning out or rupturing of the element. The solenoid valve is another area where scale collects. If the valve sticks open, fresh water will constantly flow into the machine, which also activates the soap and wetting agent to disperse. If the valve sticks closed, fresh water will not come into the machine; therefore dishes will not be rinsed properly. The piping and spray heads are problem areas that frequently plug up, preventing proper dispersion of wash and rinse waters.

Hard water will also cause a larger amount of soap to be consumed. Soap has a tendency to encompass the minerals in the water; therefore, additional soap is required to dissolve in the water. The minerals will adhere to the glasses, silverware, and dishes and when water dries and evaporates, these minerals then become water spots. Water spots eventually build up over a period of time, causing a very distasteful appearance.

There are many different types of automatic dishwashers ranging from one compartment to several compartments. In a three compartment model, the dishes are pre-rinsed in the first tank, washed in the second tank, and final rinsed in the third tank with 180°F water.

Sizing & Location: All water to the washer must be treated.

A dishwasher can have many different hook-ups. It is important that 100% of both the hot and warm water entering the tanks be Superiorized®. The entire dishwasher can be treated with one unit if it is placed before the water line tees off to the heat booster, otherwise two units should be used. Size according to the maximum flow rate.

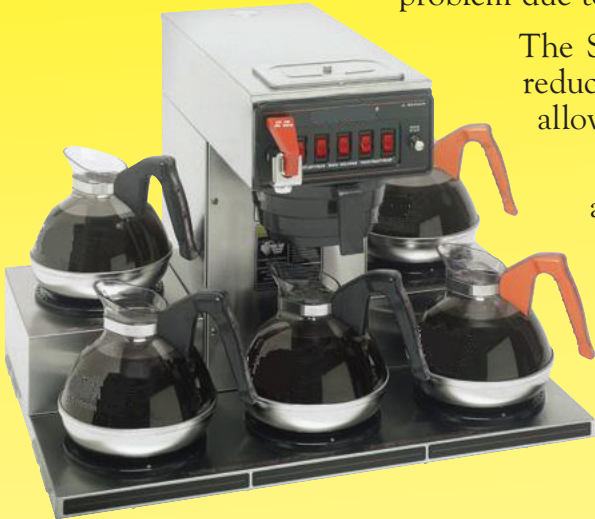


COFFEE MAKERS

Scale plugs lines and insulates heating coils very quickly in coffee makers because of the small diameter tubing and the constant heating of cold, hard water. Scale also reduces efficiency of equipment and requires more energy to operate. Premature heating element failure is another common problem due to the extreme heat that is held in by scale build-up.

The Superior Water Conditioner® controls this hard build-up and reduces the water surface tension, absorbing more flavor, which allows less coffee to be used.

Sizing & Location: The following sizing chart can be used as a guide for sizing a Superior Water Conditioner® for coffee makers:



Urns using a manual fill valve from direct water line (pressure, no restrictor) requires a Superior Water Conditioner® model RT-500-SS (4 GPM).

COFFEE MAKER SIZING CHART

<u>Fill Rate</u>	<u>Superior Model #</u>
0 - 1 Quart/Min	C-25
1 - 2 Quart/Min	C-50
2 - 3 Quart/Min	C-75
1 Gal/Min	C-100

STEAM COOKING APPLICATIONS

When hard water evaporates into steam, the hardness (CaCO_3) and all other impurities are left behind. These minerals collect and crystallize, creating an insulation between the heat medium and the water. The thicker the insulation, the longer it will take to produce steam which requires more energy. The Superior Water Conditioner® controls this scale build-up and keeps equipment operating at maximum efficiency.

Sizing & Location: All steamers using packaged boilers up to and including 15 PSI operating pressure and containing up to two compartments and one kettle (up to 250,000 BTU, or 36KW) will use the Superior Water Conditioner® model RT-500-SS.




All larger steamer-kettle combinations containing up to three compartments and two kettles (300,000 BTU, or 48KW) will use the Superior Water Conditioner® model RT-750-SS.

On small table-top steamers a model C-50 is needed when 1/4" tubing feeds the boiler and a model C-100 on all units with 3/8" feed.

Bun warmers require the Superior Water Conditioner® model C-25 for 1/4" feed lines and a C-75 for 3/8" feed lines.



SIZING AND CAPACITY

	MODEL NO.	CAPACITY	INLET-OUTLET	DIAMETER	LENGTH	WEIGHT
 C Models	C-1	1 GPH	1/4" Compression	1"	4 7/8"	.75 lb.
	C-5	3 GPH	1/4" Compression	1 1/4"	4 7/8"	1 lb.
	C-10	6 GPH	1/4" Compression	1 1/4"	5 3/8"	1.1 lb.
	C-25	15 GPH	1/4" Compression	1 1/4"	7 5/8"	1.5 lb.
	C-50	30 GPH	1/4" Compression	1 1/4"	8 5/8"	1.7 lb.
	C-75	45 GPH	3/8" Compression	1 1/4"	9 5/8"	2 lb.
	C-100	1 GPM	3/8" Compression	1 1/4"	11 5/8"	2.2 lb.
	C-200	2 GPM	1/2" Compression	1 1/4"	11 7/8"	2.5 lb.
 RT Models	RT-500-SS	4 GPM	1/2" N.P.T.	1 1/2"	12 5/8"	4 lb.
	RT-750-SS	8 GPM	3/4" N.P.T.	1 3/4"	13"	5 lb.
	RT-1000-SS	15 GPM	1" N.P.T.	2 1/4"	13 1/2"	7 lb.
 SF Models	SF-1250-AC	30 GPM	1 1/4" Flange	6"	19 3/8"	27 lb.
	SF-1500-AC	50 GPM	1 1/2" Flange	7 1/2"	23 3/4"	51 lb.
	SF-2000-AC	75 GPM	2" Flange	8 1/2"	28"	68 lb.
	SF-2500-AC	110 GPM	2 1/2" Flange	9"	31"	82 lb.
	SF-3000-AC	175 GPM	3" Flange	10"	35 5/8"	117 lb.
	SF-4000-AC	250 GPM	4" Flange	11"	39 3/4"	170 lb.

Additional sizes up to 50,000 GPM and special units for OEM applications are available for boilers, cooling towers, heat exchangers, etc.

In order to stay abreast of all changes and innovations in the industry, Superior and/or their engineers maintain active memberships in the following organizations:



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