

Protect your water using equipment from Lime Scale and Corrosion.

Ice Makers • Dishwashers • Coffee Makers • Steamers • Small Boilers • Atomizers • Humidifiers

Hard water minerals create the need for costly service calls, repairs, and possible replacement of water-using equipment.

A proper preventative maintenance program can ensure trouble free operation of this equipment.

Such a program could pay for itself over and over again as well as increase energy efficiency thus resulting in higher profit margins.



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 piping and on heat transfer surfaces.

This insulating scale build-up reduces efficiency of equipment, increases energy requirements, and increases maintenance time and costs.

Maintaining scale-free surfaces assures optimum heat transfer coefficients, enabling the maximum utilization of water-using equipment.

We offer the Enviro-Pure™ Water Conditioner as a solution to these lime/scale 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 sludge form.

The solids can then be easily removed by opening a drain at the bottom of the equipment.



The majority of service calls on this equipment are directly or indirectly water related.

Commercial Dishwashers

Hard water creates a variety of problems in washing equipment; the heating element or steam heat exchange tubes in a 180° F booster will 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. 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 collect around 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 evaporates, these minerals then become water spots. These water spots eventually build up over a period of time causing a very unsanitary 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.

UNITS FOR DISHWASHERS

EP-RT-500-K	4GPM	1/2" NPT	4 LBS.
EP-RT-750-K	8 GPM	3/4" NPT	5 LBS.
EP-RT-1000-K	15GPM	1" NPT	7LBS.



Sizing & Location

A dishwasher can have many different hook-ups. It is important that 100% of both the hot and warm water entering the tanks be treated by the Enviro-Pure™ Water Conditioner.

The entire dishwasher can be treated with one (1) unit if it is placed before the water line tees off to the heat booster, otherwise two (2) units should be used.

Sizing of the Enviro-Pure™ Water Conditioner should be based according to the maximum flow rate of the equipment.

NOTE:

It is important to explain to the customer that conditions sometimes get worse before they get better.

As the scale starts to dissolve, the dishes and silverware will sometimes spot worse during the "clean-up" period.

This depends on the condition of the heat booster and the rinse tank prior to installation of the Enviro-Pure™ Water Conditioner

Commercial Ice Machines



There are many different makes and models of ice machines which make ice cubes, iceflakes, or ice snow, but their operation principles are all basically the same.

A malfunctioning solenoid valve is most common in all ice cuber 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 a "cloudy" ice cube. On flake equipment, most problems are caused by scale formation on the auger.

Sizing & Location

Install the Enviro-Pure™ 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.

Hold the float valve wide open and take an actual measurement to determine the maximum flow rate.

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 Enviro-Pure™ Water Conditioner will be needed to condition each of the two lines.

An Ice Machine must have a means to purge the precipitated minerals. If it is not incorporated into the design of the machine, then a purge must be done manually or a system must be devised to purge these minerals.

If the machine is operated only intermittently for a few hours at a time, a bleed-off must be installed. The bleed-off must be very small – use a 1/8" copper tube pinched down on the outlet end.

UNITS FOR ICE MACHINES

EP-C-5	3GPH	1/4" COMP.	1 LBS.
EP-C-10	6GPH	1/4" COMP.	1.1LBS.
EP-C-25	15GPH	1/4" COMP.	1.5 LBS.
EP-C-50	30GPH	1/4" COMP.	1.7 LBS.
EP-C-75	45GPH	3/8" COMP.	2 LBS.
EP-C-100	1 GPM	3/8" COMP.	2.2 LBS.
EP-C-200	2GPM	1/2" COMP.	2.5 LBS.
EP-RT-500-K	4GPM	1/2" NPT	4 LBS.
EP-RT-750-K	8 GPM	3/4" NPT	5 LBS.
EP-RT-1000-K	15GPM	1" NPT	7LBS.

Commercial Coffe Makers and Espresso Machines



Scale plugs lines and insulates heating coils very quickly in coffee makers because of the small diameter tubing and the constant heating of fresh water.

Scale also reduces efficiency of equipment and requires more energy to operate.

Premature element failure is another common problem due to the extreme heat that is held in by scale build-up.

The Enviro-Pure™ Water Conditioner controls this hard build-up and can lower the water surface tension, extracting more flavor and allowing for a cut back in coffee usage yet maintaining the same flavor.

Caution must be used to periodically check any half gallon brewer without a bottom drain in the water reservoir, as a soft aragonite talc may build up. Talc deposits are easily rinsed away.



COFFEE MAKER SIZING CHART

The following sizing chart can be used as a guide for sizing an Enviro-Pure™ Water Conditioner for coffee makers and espresso machines.

Fill Rate	EP Model #
0-1 Quart/Min.	EP-C-25
1-2 Quart/Min.	EP-C-50
2-3 Quart/Min.	EP-C-75
1 Gallon/Min.	EP-C-100

Urns using a manual fill valve (pressure with no restrictor) require an Enviro-Pure™ Water Conditioner model EP-RT-500-SS (4GPM).



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, thereby creating an insulation between the heat medium and the water.

The thicker the insulation, the longer it will take to produce steam. The longer it takes to produce steam, the more energy that is required to do so.

The Enviro-Pure™ Water Conditioner controls the scale build-up and keeps your equipment operating at maximum efficiency during its' service life.



Sizing & Location

All steamers using packaged boilers up to and including 15PSI operating pressure and containing up to two (2) compartments and one kettle (up to 250,000 BTU, or 36KW) will use the Enviro-Pure™ Water Conditioner Model EP-RT-500-SS (4GPM).

All larger steamer-kettle combinations containing up to three(3) compartments and two (2) kettles (300,000 BTU, or 48KE) will use the Enviro-Pure™ Water Conditioner Model EP-RT-750-SS.

On small table-top steamers an Enviro-Pure™ Water Conditioner Model EP-C-50 is needed when 1/4" tubing feeds the boiler and a Model EP-C-100 on all units with a 3/8" feed.

Bun warmers require an Enviro-Pure™ Water Conditioner Model EP-C-25 for 1/4" feed lines and an EP-C-75 for 3/8" feed lines.

