

“S O S”

Salt-Out-System

Aqualogic's new salt removal system is designed to remove the crystals that form in evaporators as they concentrate solutions. The objective is to remove the crystals on a continuous basis reducing the manual, labor intensive efforts required to clean the evaporators and further reducing the frequency of cleaning.



System Description

The system removes concentrated solution from the evaporator reservoir and pumps through the “SOS” unit. The

solution flows into the separation chamber where the salt crystals and a small volume of solution are dropped through the bottom nozzle and a high volume of solution is returned to the evaporator free of crystals. This action will eventually fill the 55 gallon drum located below the nozzle. A special drum extension allows the excess water to return to the evaporator reservoir by gravity allowing the drum to compact with salts.

When the drum is filled, the drum extension is removed. The drum is capped and removed for disposal, requiring no physical handling of the separated salts. A new 55 gallon drum is placed, the extension attached, and the process begins again.

Equipment

The “SOS” unit is a modular, freestanding system with a painted steel framework. The basic floor space requirement is 30” by 36”. The system includes a stainless steel drum extension with lift-off handles, gasket ring, and closure ring. The unit has a weir assembly that allows gravity flow back to the evaporator. The unique design also drains the liquid below the top rim of the drum. The centrifugal separator is fabricated of glass filled epoxy with a wear resistant inner coating. Special locking connectors are used to provide hose connections to the evaporator. A vertical, sealless pump is provided in either PVDF or stainless steel construction (depending on application).

Specifications

Overall dimensions:	30" X 36" X 66"
Power required:	½ hp 120/240V/1/60 15 Amp service
Container size:	55 gallon standard DOT One provided with unit
Connections to evaporator:	20 ft of hose supplied Customer to cut to size

The nature of the salt product will vary from each solution that may be applied to the "SOS" system. The salt removal efficiency of the system will vary with the type of salts present. Excellent efficiency has been obtained with crystalline type salts, while amorphous salts usually require chemical conditioning. The process has proved successful with many different treated plating wastes. A synopsis of the chemistry entering the evaporator will usually allow a prediction of process efficiency. Salt removal rates of up to 1000 pounds per day have been obtained from a single evaporator.

Options

A mixer can be provided for installation in the service/inspection area of the mixer. The mixer will help to keep precipitated salts suspended in the evaporator chamber to allow removal with the "SOS" system. This option also minimizes salt build-up on heat transfer surfaces, maintaining heat transfer efficiency. The mixer is direct drive with a "C" clamp mount and a 1/3 hp 120/240/1/60 motor. All wetted components of the mixer are 316 SS.