

SMI Why Evaporate?

EVAPORATOR



SMI MECHANICAL EVAPORATORS

SMI Evaporators are now used to manage water in industrial environments, producing water evaporation rates beyond traditional approaches such as misting heads and irrigation systems.

SMI has two main categories of evaporators:

1. **Water fracturing evaporators.** Water is fractured through a high-speed fan and propelled into the air. Best for smaller areas where wastewater contains high solids or large particulates.
2. **Water atomizing evaporators.** Air is compressed via a fan through a tapered barrel and propels controlled-size water droplets created via nozzles. Best for larger areas where wastewater contains lower dissolved solids or smaller to no particulates.

** Water fracturing evaporators can be land-based or floating on pontoons. Our 420F (floating) Evaporator is situated in the center of the reservoir, so any un-evaporated liquids or contaminants are contained within the permitted area.*

WHY EVAPORATE?

Evaporation is being considered as an alternative process to a number of wastewater treatment applications such as Reverse Osmosis, Chemical Dosing or Desalination. The evaporation process may be carried out naturally in solar evaporation ponds (which is slow and requires a great deal of area) or by mechanical evaporation machines. Natural solar evaporation is often limited by land availability and the cost of constructing additional storage ponds, not to mention the added cost of clean up and revegetation.

Evaporation machines can rapidly increase the evaporation process, with up to 14 times more efficiency than space taken by the same area of pond. Evaporation machines are relatively compact, reliable and efficient and can be transported to different sites as necessary. They can be a low cost addition to enhance evaporation on existing containment ponds or to minimize new pond surface area.



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E V A P O R A T O R



Smart H2O™ Automation



SMI EVAPORATIVE SOLUTIONS

SMI produces durable industrial evaporators designed for a range of environments and operating conditions. Our equipment and systems can be a low cost addition when considering zero discharge options at your site. We offer complete wastewater solutions, from initial site analysis to remote centralized computer control systems. We monitor droplet size and climate data, then modulate flow at each individual evaporator to maximize efficiency and contain spray drift within the operational area.

With over 1,000 Evaporators in the field at over 250 customer locations, SMI is the largest mechanical evaporator manufacturer. Our systems are used in a variety of industries including mining, oil and gas, food processing, wood processing, small town waste treatment and power generation.



**Evaporative
Solutions**

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