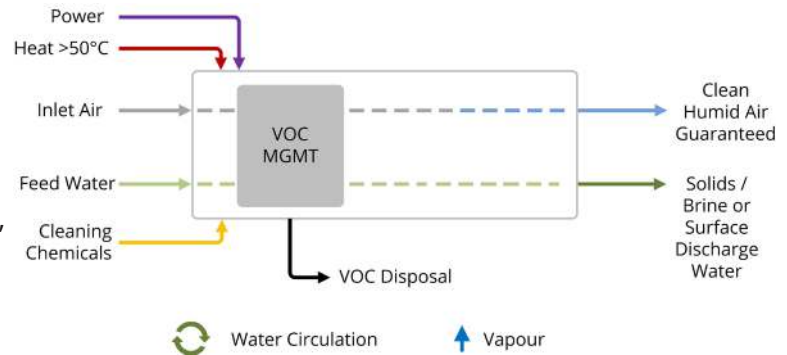


# SaltMaker-AirBreather

## Open Evaporator Crystallizer

Low grade heat brine concentrator or zero liquid discharge (ZLD) system:

- Two options: closed or open to atmosphere
- Guaranteed to meet all emissions including: VOCs, Methanol & Particulates
- Cost effective & rugged; Smart design for reliability
- 3x capacity; 4x thermal energy (50°C) vs. SaltMaker



**REDUCES BRINE VOLUME**

**PRODUCES SOLID SALT**

**NO CHEMICAL PRE-TREATMENT**



**AB100 - 3 x TRAILERS**



**AB300 - ISO CONTAINER BLOCKS**

### Reliable

High redundancy to perform in harsh, demanding environments. Constructed with durable, non-stick, non-corroding wetted parts.

### Volatile Management System

Built-in system to capture and safely dispose of VOCs and meet air emission standards.

### Rapid Deployment

Modular design enables rapid transport and assembly at site. Pre-fabricated ISO container blocks for easy transport and install.

### Simple Solids Management

No chemical pre-treatment or softening sludge required. A single-step process discharges solids in bags or bins for easy handling.

### Cost Effective Operations

Intelligent automation maximizes performance with capacity control, self-cleaning, and self-diagnosis.

### Total Support Options

Complete package delivery and installation options. Remote monitoring, 24/7/365 expert assistance and predictive maintenance to keep AirBreather running smoothly.

## General Specifications

<b>Heat Source</b>	Any source (>50°C, 90°C preferred). Use low grade heat to treat water. ~3.2-4 GJ/m <sup>3</sup> (4x SaltMaker due to single effect).	
<b>Electrical Energy Consumption</b>	• ~20 kWh/m <sup>3</sup> for brine production	• ~30 kWh/m <sup>3</sup> for solids production
<b>Voltage</b>	Any voltage, 3 phase, 50/60 hz	
<b>Brine Concentrator De-Rate</b>	Concentrate to 450,000 mg/L; de-rate by 20%	
<b>Crystallizer (Solids) De-Rate</b>	Produce solids; de-rate by 40%	

## Capacity & Size

	<b>AB100</b>	<b>AB300</b>
<b>Clean Water Removal Capacity (Evaporator non de-rated)</b>	100 m <sup>3</sup> /d (630 BPD)	300 m <sup>3</sup> /d (1,890 BPD)
<b>Brine Concentrator Size</b>	3-4 x 50' Trailers or 50' x 50' x 20' H	50' x 80' x 35' H ISO Blocks
<b>Crystallizer (Solids) Size</b>	3-4 x 50' Trailers or 50' x 50' x 20' H	65' x 80' x 35' H ISO Blocks

## Primary Features

<b>Cost Effective</b>	<ul style="list-style-type: none"> <li>• No pre-treatment</li> <li>• Uses waste heat</li> <li>• High capacity modular package</li> </ul>
<b>Differentiated from other open evaporators</b>	<ul style="list-style-type: none"> <li>• Produces a concentrated brine or solids</li> <li>• No combustion by-products</li> <li>• No hot plume (cooling tower, vapour instead)</li> <li>• No corrosion</li> <li>• Volatiles management</li> <li>• Single modular package</li> </ul>
<b>Emissions Management</b>	Proprietary - not for public disclosure. Contact Saltworks for project assessment.
<b>Modularity</b>	Expandable with your needs. ISO blocks movable to new sites.
<b>Safety</b>	Low pressure, low temperature, modules slide in and out for inspection and maintenance. No confined spaces, easy lock-out, and ergonomic design.
<b>Reliability</b>	Smart process design for reliable slurry or solids production. Avoids conventional boiling and evaporation on heat transfer surfaces, which causes scale. Self cleans while running.
<b>Durability</b>	Non-corroding, non-stick, no pressure vessels (atmospheric pressure) <ul style="list-style-type: none"> <li>• Pipework: UPVC and CPVC.</li> <li>• Modules and tanks: gel-coated, fibre-reinforced plastics.</li> <li>• Pumps: engineered plastics, no wetted metallic parts.</li> <li>• Heat exchangers: titanium, non-boiling (no boiling nuclei scaling).</li> </ul>
<b>Automation</b>	<ul style="list-style-type: none"> <li>• Automated self-cleaning, start, stop and capacity control. Ramp up from 25% to 100%, or hibernate at 0% while circulating.</li> <li>• Programmed to remove scale before it becomes irreversible.</li> <li>• High quality instrumentation and sensors package.</li> <li>• PLCs with user-friendly graphical interface and controls that offer remote login, data logging, and trend analysis.</li> <li>• Variable Frequency Drives (VFD) for energy efficiency.</li> </ul>

## Standard Package & Options

<b>AirBreather SaltMaker Plant</b>	Complete packaged system, from inlet to discharged treated water and solids. Arrives with technician to support your installation.
<b>Training &amp; Support</b>	On-site training and commissioning. Ongoing support with videos, tutorials, checklists, and remote assistance.
<b>Thermal Energy</b>	Waste heat conversion (>50°C), low pressure steam, hot water, or gas fired options.