

## SaltMaker MVR

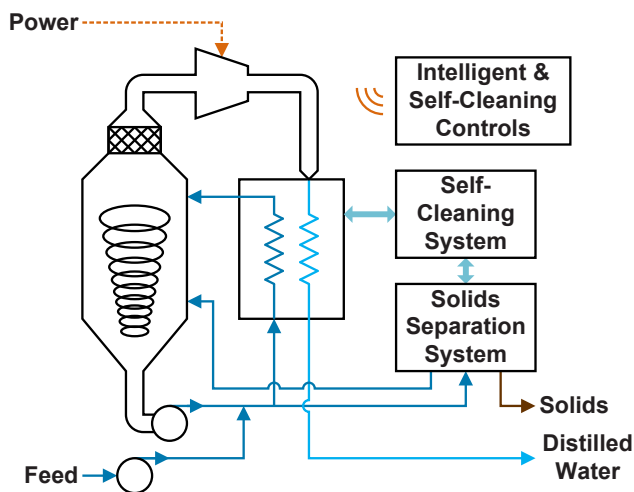
### Electrically Driven Lithium Concentrator & Crystallizer

- Maximize yield by concentrating lithium chloride with reliable, economic evaporation OR produce lithium hydroxide solids
- Modernized mechanical vapor recompression (MVR) evaporative crystallizer with integrated solids management
- Robust, top-quality build with intelligent automation for self-cleaning and ease-of-operation
- Modular blocks for rapid, low-cost site installation
- Crystallizes 5,000–20,000 tonnes per year of lithium carbonate equivalent (LCE) as lithium hydroxide



Heat Exchanger: Shell and tube or plate and frame

### Concentrate LiCl or Crystallize LiOH



### Concentrating, Refining, Converting Experts

We are focused on concentrating, refining, and converting lithium chloride solutions to battery- or technical-grade lithium products.

### Low-Cost Install and Fast Start-Up

Built from pre-assembled and factory-tested modules for easy, low-cost installation at site.

### Intelligent Automation

Intelligent automation with self start-up, capacity control, hibernation, and safe shut down. Built-in heat exchanger monitoring and cleaning.

### Battery-Grade Solid Salt Production Packages

Options available for comprehensive solids production and management. Systems include an integrated decanter centrifuge and solid slurry management system.

### Tightly Controlled Production and Supply Chain

Saltworks' factory builds systems at our quality-controlled production facility, with in-house supply chain and engineering.

### Lithium Chemistry Expertise

Evaporation, crystallization, slurry management, and corrosion control require deep expertise. Saltworks' Ph.D. chemists and experienced engineers make sure your system package is designed and built right for your application.

## Utility Requirements

Heat Source	Not required
Electrical Energy Consumption	40–60 kWh/tonne H <sub>2</sub> O evaporated
Voltage	3 phase, voltage & frequency per customer site

## Capacity, Performance & Size

Evaporation Capacity	50–200 tonnes per day (50–200 m <sup>3</sup> /day volume reduction)
Lithium Hydroxide Capacity	5,000–20,000 tonnes per year of lithium carbonate equivalent (LCE) as lithium hydroxide (input chemistry dependent)
Typical Operating Pressure	40 kPa absolute (60% vacuum)
Evaporator Size	Modules, standard shippable skids: L65' x W25' x H30'
Crystallizer Size	Add decanter module, size varies based on solids load: L20' x W8.5' x H20'

## Primary Features

Lower Cost	<ul style="list-style-type: none"> <li>• Rapid site installation: place frames and connect modules</li> <li>• No pre-treatment required</li> <li>• Higher uptime through reliable design &amp; sound automation</li> </ul>
Quality Delivered	<ul style="list-style-type: none"> <li>• Tier 1 components including heat exchangers, vapor compressors, brine circulation pumps, instrumentation, electrical and controls</li> <li>• Proactive and responsive project management inclusive of project integration</li> <li>• Excellent documentation and training packages</li> </ul>
Reliability	<ul style="list-style-type: none"> <li>• Smart process design for reliable solids production</li> <li>• Avoids scale caused by conventional boiling evaporation on heat transfer surfaces</li> <li>• Self-cleans while running</li> </ul>
Metallurgy	<ul style="list-style-type: none"> <li>• Corrosion-resistant construction materials balanced with project-specific economics</li> </ul>
Automation	<ul style="list-style-type: none"> <li>• Automated self-cleaning, start, stop, and capacity control: ramp 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>• 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

SaltMaker Plant	Complete packaged system, from inlet to discharged water and solids. Arrives with technician to support your installation
Training & Support	On-site training and commissioning. Ongoing support with videos, tutorials, checklists, and remote assistance
Additional Options	<p>Ongoing operational support:</p> <ul style="list-style-type: none"> <li>• Remote Operations Asset Management (ROAM): 24/7 remote monitoring and customizable daily reports</li> <li>• Operations packages: Saltworks operates SaltMaker MVR on-site</li> </ul>