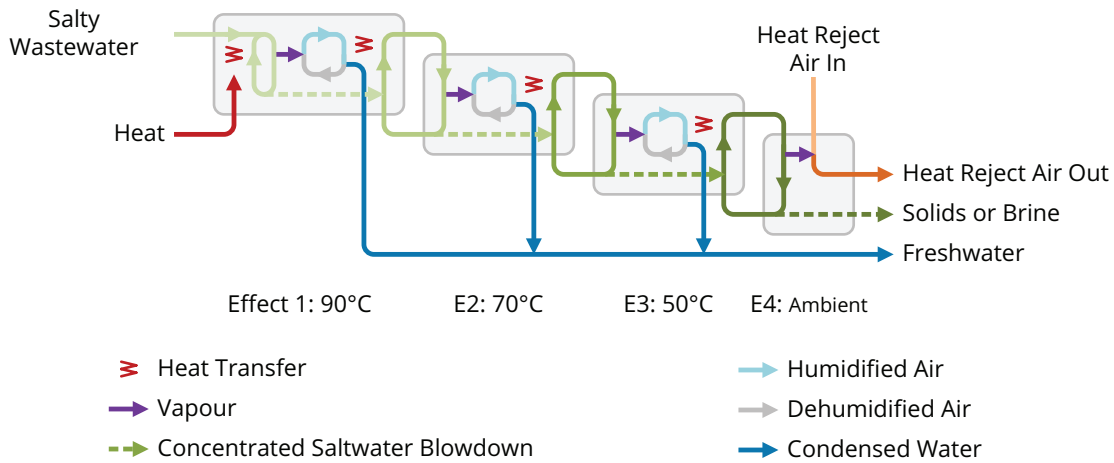


SaltMaker MultiEffect Closed Evaporator Crystallizer

All-in-one zero liquid discharge (ZLD):

- Reduces brine volume
- Produces solid salt
- Requires no chemical pre-treatment
- Cleans while operating



Process flow diagram for the SaltMaker MultiEffect: Multiple-effect air humidification-dehumidification during operation

Reliable

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

Cost-Effective Operations

Intelligent automation maximizes performance with capacity control, self-cleaning and self-diagnosis. Pre-programmed for easy hibernation, start-up and shutdown.

Simple Solids Management

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

Rapid Deployment

Modular design enables rapid transport and assembly at site. Pre-fabricated ISO container modules are tested before they ship.

Total Support

Complete packaged delivery and installation options. Remote monitoring, 24/7/365 expert assistance, reporting dashboards, and predictive maintenance keep every SaltMaker MultiEffect plant running smoothly.

Energy Efficient

Multiple effects lower energy requirements by recycling heat. Options are available for using waste heat as an energy source.

Utility Requirements

Thermal Source	~0.8–1.1 GJ/m ³ or MMBTU/m ³ Steam or hot water (95 °C); use low-grade heat to treat water 1500 kW of heat, based on 125 m ³ /d removed	
Electrical Energy Consumption	~45 kWh/m ³ removed (Concentrate brine to 450,000 mg/L)	~60 kWh/m ³ removed (Solids production)
Power	400–600 VAC, 3-phase, 50/60 Hz	

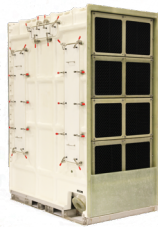
Capacity, Performance & Size

Model & Capacity	S30	S66	S100	S125
Clean Water Removal Capacity	30 m ³ /d	66 m ³ /d	100 m ³ /d	125 m ³ /d
Brine Concentration De-rate	Concentrate to 450,000 mg/L; de-rate by 20%			
Crystallizer (Solids) De-rate	Produce solids; de-rate by 40%			
Brine Concentrator Size (L x W x H)	30' x 45' x 35'	50' x 45' x 35'	50' x 45' x 35'	70' x 45' x 35'
Crystallizer (Solids) Size (L x W x H)	45' x 45' x 35'	65' x 45' x 35'	65' x 45' x 35'	85' x 45' x 35'

Primary Features

Redundancy

Multiple mass-produced modules in one plant



Evaporation module



Heat recovery module

Safety	Low-pressure, low-temperature modules slide in and out for inspection and maintenance; no confined spaces, easy lock-out, and ergonomic design
Reliability	Smart process design for reliable slurry or solids production; avoids conventional boiling evaporation on heat transfer surfaces, which causes scale; self cleans while running
Durability	Non-corroding, non-stick, no welding, no pressure vessels: <ul style="list-style-type: none"> • Pipework: UPVC and CPVC • Modules and tanks: gel-coated, fiber-reinforced plastics • Pumps: engineered plastics, no wetted metallic parts • Heat exchangers: titanium, non-boiling (no boiling nuclei scaling)
Automation	<ul style="list-style-type: none"> • Automated self-cleaning, start, stop and capacity control; ramp from 25–100%, or hibernate at 0% while circulating • Programmed to remove scale before it becomes irreversible • High-quality instrumentation and sensors package • PLCs with user-friendly graphical interface and controls that offer remote login, data logging, trend analysis • Variable Frequency Drives (VFD) for energy efficiency

Standard Package & Options

SaltMaker Plant	SaltMaker MultiEffect is a complete packaged system, from inlet to discharged treated water and solids; technician provided to support your installation
Training & Support	On-site training and commissioning; support comes with videos, tutorials, checklists, and remote assistance
Thermal Energy	Gas or liquid fuel-fired thermal source and waste-heat conversion options
Additional Options	<ul style="list-style-type: none"> • Turnkey package, including build, delivery, install • Remote Operations Asset Management (ROAM): 24/7 remote monitoring and customizable daily reports • Operations packages: Saltworks operates the SaltMaker MultiEffect on-site