

Osmoflo Brine Squeezer Technology

Patented technology to maximise recovery of reject
brine from reverse osmosis



Osmoflo has developed a patented Osmoflo Brine Squeezer (OBS) technology to maximise the recovery of the reject brine from reverse osmosis plants.

Osmoflo Brine Squeezer features innovative design and operational strategies to manage fouling and scaling by combining known membrane principles.

This Australian based invention is a direct response to industry and client needs on a global scale. Pushing the boundary of reverse osmosis, this technology draws from Osmoflo's 28 years' experience in reverse osmosis, spanning over 450 projects.

What is Osmoflo Brine Squeezer (OBS)?

Where conventional reverse osmosis is limited, OBS is able to operate at recoveries of up to 98% through innovative design, operation and membrane recovery. This provides obvious advantages to clients in terms of operational efficiency, cost savings, further brine concentration as well as environmental benefits.

Brine can be concentrated up to 150,000mg/L TDS. The systems are scalable to virtually any total production capacity, with a specific energy consumption that ranges from 6 to 8 kWh/m³.

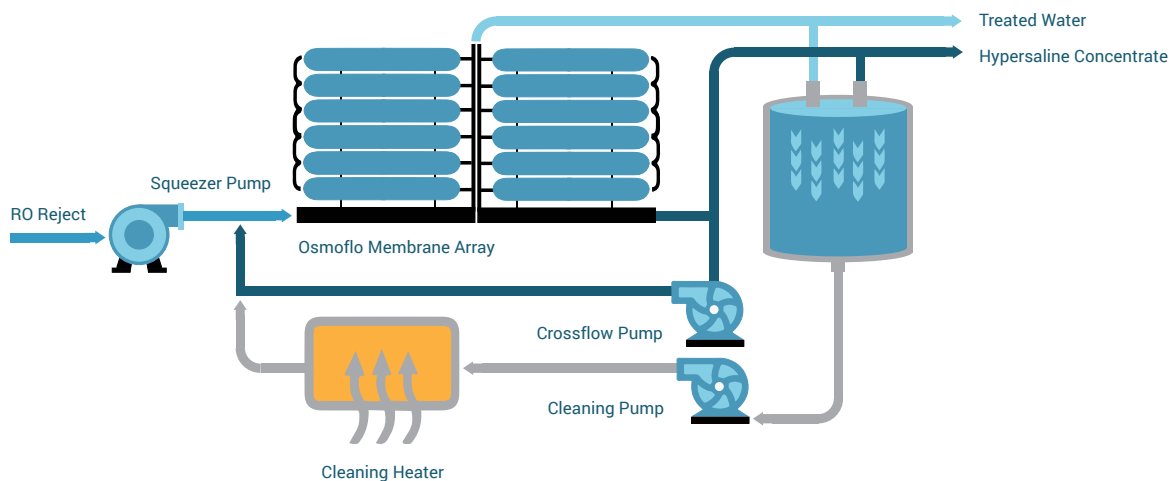
OBS is easily 'bolted-on' to existing processes and plants, and as an independent system, can be easily containerised if required for rapid deployment and onsite installation.

Pilot Plants

Osmoflo recommends the use of a pilot plant to firstly qualify suitability of the technology for the application by determining stable operation at elevated recoveries.

Secondly to further quantify the ongoing and associated energy and chemical costs, which in turn benefits the client as the water, energy and chemical costs can all be estimated prior to implementing a water solution.

Osmoflo Brine Squeezer (OBS) Process



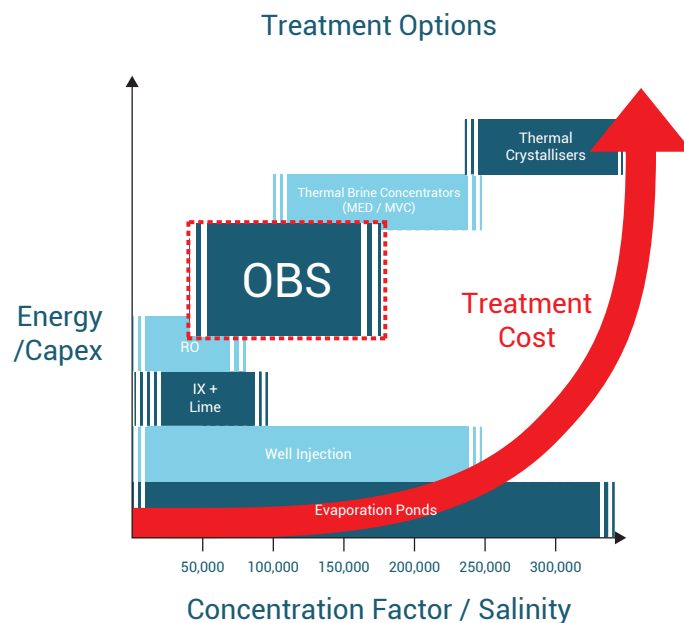
Key Projects

Application	Problematic Constituents	OBS Feed OC (uS/cm)	Overall Plant Recovery Improvement
Mine affected water	Heavy metals, transition metals, uranium, silica, organics, bacteria	4,000-6,000	75% => 95%
Brewery - bore water	Hardness, silica, iron	20,000-22,000	75% => 92.5%
CSG Produced Formation Water	Barium, Strontium, Organics	40,000-50,000	50% => 80%+

Benefits of Osmoflo Brine Squeezer

- Reduction in the brine volume when brine storage options are limited.
- Increase treated water production.
- Fouling / Scaling removal: The unique combination of membrane properties is optimised for scaling resistance.
- Self-contained modular design: Providing ease of transport and setup on site.
- Automation and instrumentation: achieves operational autonomy, maximises effectiveness of routine cleaning functions, minimises operator intervention and provides associated labour savings.
- Sacrificial coatings and automated application -to protect membranes and further mitigate scaling effects.

Treatment Options compared with Osmoflo Brine Squeezer (OBS)



Locations

Australia

India

Oman

United Arab Emirates

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