

PRODUCT DATA SHEET

Sea Water Reverse Osmosis (SWRO) Systems

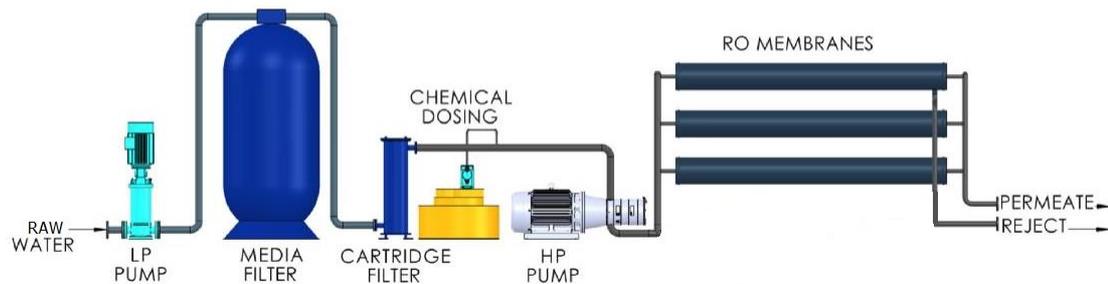


OVERVIEW

Microsoll's Sea Water Reverse Osmosis (SWRO) plants are designed to treat water, with < 35,000 mg/L of dissolved solids (TDS) and < 10 mg/L of suspended solids (TSS), to achieve potable water quality. The standard treatment process involves pre filtration (auto backwashing multimedia filters and cartridge filters), anti-scalant dosing to prevent membrane scaling, RO desalination and auto flushing and CIP systems for membrane cleaning. Additional pre-RO and post-RO treatment steps may be added as required to suit feed water conditions and/or treated water quality requirements. The Waterland SWRO plants are available as skid mounted or containerised systems.



ADDITIONAL FLOW RATES AND CUSTOMISED SOLUTIONS ARE AVAILABLE. JUST ASK US.



STANDARD SPECIFICATIONS

Parameter	Units	SWRO-1	SWRO-2	SWRO-3	SWRO-4	SWRO-5	SWRO-6	SWRO-7	SWRO-8	SWRO-9	SWRO-10
Permeate Flow Rate	m ³ /d	10	20	30	40	50	60	70	80	90	100
Permeate Recovery Rate	%	40 - 45									
Permeate TDS	mg/L	< 250									
Raw Water TDS	mg/L	< 35,000									
Raw Water TSS	mg/L	< 10									
Raw Water Temperature	°C	15 ~ 30									
Ambient Design Temperature	°C	15 ~ 30									
RO Water Inlet Pressure	bar	3 - 4									
RO Unit High Pressure	bar	40 - 60									
RO Brine Discharge Pressure	bar	25 - 35									
Power Supply	-	380~450 V, 3 Phase, 50/60 Hz									

STANDARD INCLUSIONS + OPTIONS

✓ = Standard Supply, o = Optional Supply, - = Not Applicable

Equipment	SWRO-1	SWRO-2	SWRO-3	SWRO-4	SWRO-5	SWRO-6	SWRO-7	SWRO-8	SWRO-9	SWRO-10
Skid Mounted Plant & Equipment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Low Pressure Feed Pump	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
High Pressure RO Pump (c/w ERD)	Std Efficiency	✓	✓	✓	✓	✓	✓	✓	✓	✓
	High Efficiency	-	o	o	o	o	o	o	o	o
Pre-filtration	Sand Filter	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Ultra Filtration	o	o	o	o	o	o	o	o	o
	Activated Carbon	o	o	o	o	o	o	o	o	o
	Cartridge Filters	✓	✓	✓	✓	✓	✓	✓	✓	✓
Anti Scalant Dosing System	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Membrane CIP & Auto Flush System	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
PLC Control System with HMI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Container with Insulation & climated	o	o	o	o	o	o	o	o	o	o
Additional Post-RO Treatment	o	o	o	o	o	o	o	o	o	o
Premium Instrumentation Package	o	o	o	o	o	o	o	o	o	o
Permeate Distribution Pump Set	o	o	o	o	o	o	o	o	o	o

Instrumentation	Standard Package
Pressure Gauges	✓
Pressure Transmitters (4-20 mA)	o
HP RO Pump Inlet Low Pressure Switch	✓
Flow Gauges (Rotameters)	✓
Flow Transmitters (4-20 mA)	o
Conductivity Transmitter (4-20 mA)	✓
Float Switches (Feed/Permeate, Chemical Dosing & CIP Tanks)	✓
Remote Monitoring & Control Capabilities	o

