

PRODUCT DATA SHEET

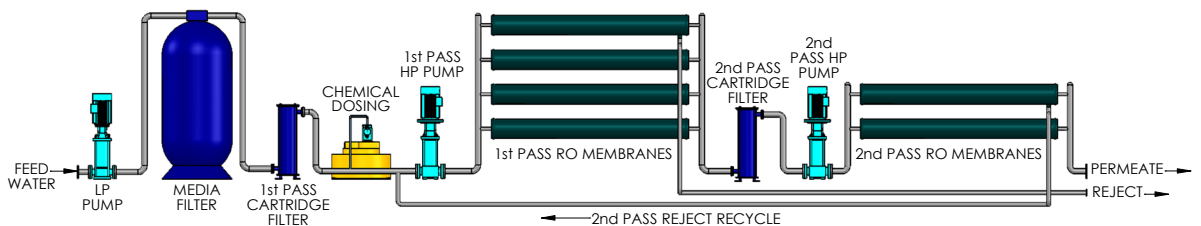


Demineralised Water Treatment Plant (DMRO)

water | wastewater | sewage

OVERVIEW

MAK Water's Demineralised Water Treatment (DMRO) Plants are designed to treat fresh water, with $< 1,000$ mg/L of dissolved solids (TDS) and < 30 mg/L of suspended solids (TSS), to produce high purity demineralised water with TDS < 1 mg/L. The standard treatment process involves pre filtration (auto backwashing multimedia filters and cartridge filters), anti-scalant dosing to prevent membrane scaling, two-pass RO desalination and a CIP system for membrane cleaning; with the inclusion of optional mixed bed ion exchange or continuous electro deionization (CEDI), TDS < 0.1 mg/L can be achieved. 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 MAK DMRO plants are available as skid mounted or containerised systems.



STANDARD SPECIFICATIONS

Parameter	Units	DMRO-25	DMRO-50	DMRO-100	DMRO-150	DMRO-250	DMRO-500	DMRO-1000
Permeate Flow Rate	m ³ /day	25	50	100	150	250	500	1000
Permeate Recovery Rate	%	<55	<60	<75	<75	<75	<80	<80
Permeate TDS	mg/L	<1 (<0.1 with ion exchange or CEDI) @ 25°C						
Raw Water TDS	mg/L	<1,000						
Raw Water TSS	mg/L	<30						
Raw Water Temperature	°C	<45						
Ambient Design Temperature	°C	5 ~ 45 (-15 ~ 50 for insulated containerized system)						
Feed Water Inlet Pressure	kPa	>15 (flooded suction)						
Permeate Discharge Pressure	kPa	~40 (higher discharge pressures available on request)						
Brine Discharge Pressure	kPa	~40 (higher discharge pressures available on request)						
Power Supply	-	AC 380~450 V, 3 Phase, 50/60 Hz						
Power Consumption	kW	4.5	6.7	10.2	15.2	22	33.5	67
No. Containers (Optional)	-	1 x 20'	1 x 20'	1 x 40'	1 x 40'	1 x 40'	2 x 40'	2 x 40'

STANDARD INCLUSIONS + OPTIONS

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

Equipment	DMRO-25	DMRO-50	DMRO -100	DMRO -150	DMRO-250	DMRO-500	DMRO-1000
Skid Mounted Plant & Equipment	✓	✓	✓	✓	✓	✓	✓
Low Pressure Feed Pump	✓	✓	✓	✓	✓	✓	✓
High Pressure RO Pumps (Pass 1 & 2)	✓	✓	✓	✓	✓	✓	✓
Pre-filtration	Multimedia	o	o	✓	✓	✓	✓
	Ultra Filtration	o	o	o	o	o	o
	Cartridge Filters	✓	✓	✓	✓	✓	✓
Post RO polishing	Mixed Bed Ion Exchange	o	o	o	o	o	o
	CEDI	o	o	o	o	o	o
Anti Scalant Dosing System	✓	✓	✓	✓	✓	✓	✓
Membrane CIP System	✓	✓	✓	✓	✓	✓	✓
PLC Control System with HMI	✓	✓	✓	✓	✓	✓	✓
Containerized system, c/w A/C & Lights	o	o	o	o	o	o	o
Container Insulation (walls & ceiling)	o	o	o	o	o	o	o
Container Non-Slip Floor Coverings	o	o	o	o	o	o	o
Container Side Access Door	o	o	✓	✓	✓	✓	✓
Additional Pre-RO Treatment	o	o	o	o	o	o	o
Additional Post-RO Treatment	o	o	o	o	o	o	o
Premium Instrumentation Package	o	o	o	o	o	✓	✓
Permeate Distribution Pump Set	o	o	o	o	o	o	o

Instrumentation	Standard Package	Premium Package
Pressure Gauges	✓	✓
Pressure Transmitters (4-20 mA)	-	✓
HP RO Pump (Pass 1 & 2) Inlet Low Pressure Switch	✓	✓
Flow Gauges (Rotameters)	✓	-
Flow Transmitters (4-20 mA)	-	✓
Conductivity Transmitters (4-20 mA)	✓	✓
Float Switches (Feed/Permeate & Chemical Dosing Tanks)	✓	✓
Remote Monitoring & Control Capabilities	-	✓

MODEL SELECTION

- 0025** 25 m³/day - permeate flow
- 0050** 50 m³/day - permeate flow
- 0100** 100 m³/day - permeate flow
- 0150** 150 m³/day - permeate flow
- 0250** 250 m³/day - permeate flow
- 0500** 500 m³/day - permeate flow
- 1000** 1000 m³/day - permeate flow
- XXXX** Custom permeate flow

- XX** Skid mounted plant
- CX** Containerized plant - standard
- CF** Containerized plant - with floor coatings
- CP** Containerized plant - with floor coatings & insulation
- X** Pre-RO treatment - standard
- C** Pre-RO treatment - custom
- X** Post-RO treatment - none
- I** Post-RO treatment - ion exchange
- E** Post-RO treatment - CEDI
- C** Post-RO - treatment - custom
- X** Standard Instrument Package
- P** Premium Instrumentation Package, c/w Remote Monitoring
- C** Custom Supply
- X** Without Permeate Distribution Pump Set
- C** Permeate Distribution Pump Set Custom Supply

DMRO - - - - -

NEED A QUOTE?

COMPLETE THIS TABLE AND EMAIL TO...

sales@makwater.com.au



Disclaimer: MAK Water is continuously updating and improving its products and services, so please contact us for more detailed information or to confirm specifications. MAK Water takes no responsibility for any errors resulting from the use of information contained within this document.

SAL-PDS-004 | AUG-2018