



AquaPak™ 500S

500m³/d Containerised Seawater RO Desalination Plant

Modern Water's AQUAPAK-500S desalination units are high specification, low cost, self-contained systems suitable for a variety of applications including potable or industrial water supply, temporary or emergency water supply, construction site water supply, the oil and gas industry as well as golf, resort or hotel complexes.

The AQUAPAK-500S is supplied containerised in a 40' unit that can be deployed and put into service in a short timeframe. It is manufactured using high quality components at an affordable price and is supplied and supported by Modern Water.

The AQUAPAK-500S combines Ultra-Filtration (UF) and Reverse Osmosis (RO) as standard within the process train. Other process configuration options are available to tailor the standard unit to your requirements, this could include additional pre or post treatment, storage solutions, operator training or full operational support.

The standard unit includes:

- Pressure vessels loaded with RO membranes
- High pressure pump with energy recovery
- CIP system including CIP tank
- Chemical dosing systems including post RO treatment for disinfection and remineralisation
- Cartridge filters
- Instrumentation
- Control panel - PLC
- UF membranes
- UF backwash system including pump and blower
- Self cleaning strainer
- Filtered water storage tank

TECHNICAL DATA

Capacity	500 m ³ /day		
Type	40ft container		
Dimensions	L 12.04m W 2.35m H 2.7m		
Shipping weight	ca. 12T		
Operating weight	ca. 17T		
Connections (PN 10)		Power	
Feedwater	DN 125	Connection	380V, 50Hz, 3 Phase
RO permeate	DN 65		
RO concentrate	DN 65		
Potable water	DN 80		
Ventilation	Provided with an air conditioning unit		



Supplied & supported by:
Modern Water

OPERATION SPECIFICATION

Maximum feedwater temperature	18 - 40 degC
Feedwater pressure	1 - 3 bar
Recovery	35% - 40%
Hydrogen sulphide	< 0.1 mg/l
Turbidity	<5NTU
Feedwater TDS	35,000 - 45,000 mg/l*
pH tolerance	4 - 10
Boron	< 5 mg/l
Chemical consumption (list)	NaOCl, Coag, HCl, Antiscalant, SBS, CaCl, NaHCO ₃
Nominal membrane rejection	99%

* Based on standard seawater composition

Typical Applications

- Potable or industrial water supply
- Small scale packaged plants or multi plant larger solutions
- Water supply for construction works
- Temporary water supply for breakdown, emergency or planned maintenance shut-downs
- Water supply during periods of drought

Key Benefits

- Low energy consumption
- Quick to install
- Environmentally friendly
- Cost effective
- Modular
- Fully supported
- High quality product water that meets WHO guidelines for Drinking Water Quality

Technical Support

- Planning
- Installation
- Training
- Operation
- Maintenance visits / operational support
- Spares and consumables support

Sales Contact

Key Instrumentation

- ORP (RO feed)
- pH (RO feed, post RO treatment)
- Pressure sensor (UF feed, RO permeate)
- Conductivity meter (RO feed, RO permeate, post RO treatment)
- Flow meter (UF feed, RO feed, RO permeate, RO brine)
- Pressure switch (RO feed, RO permeate)

Process Options

- Pretreatment container with media and cartridge filters
- FO and RO configurations
- Post treatment configurations

Purchase / Finance Options

- Supply / Purchase contracts
- Lease, or rental *
- Production tariff *

* Terms and conditions apply

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