

APPLIED IONICS

300-1500 lph COMMERCIAL REVERSE OSMOSIS UNITS



AIRO300 high rejection model



AIRO900 low energy model

Reverse osmosis provides a primary purification stage, using a semi-permeable membrane to reduce ions and other contaminants, up to 99%. Aqueous solutions will permeate through a semi-permeable membrane to equilibrate the ionic concentration on either side of the membrane. This process is known as osmosis, in reverse osmosis pressure is applied to the concentrated solution to drive water through the membrane and produce permeate with a lower concentration of ions than the feed water.

The reverse osmosis treatment produces two streams, high quality permeate that is passed on to the next treatment stage and concentrate (approximately 25% of the feed) which contains the majority of the feed contaminants.

Applied Ionics 4x40 inch units deliver the benefits of reverse osmosis for small application users. A high quality pre-engineered system mounted on a stainless steel skid with programmable micro-processor control.

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APPLIED IONICS

Model xxx	AIROxxx				
	300	600	900	1200	1500
Maximum Service Flowrate (l/hr)	300	600	900	1200	1500
Minimum Flowrate	200	400	600	800	1000
Nominal Rejection	99%				
Membranes	4 x 40" Thin film Polyamide				
Number	1	2	3	4	5
Pre-treatment	Activated Carbon / 1 micron sediment filter				
Install Space					
	Length	1000			
	Height	1400			
	Width	600			
Inlet	3/4"-1"				
Outlet	1/2-3/4"				
Reject	1/2-3/4"				
Power	3 phase. 415V, 2.2kW				

SYSTEM SPECIFICATIONS

- Programmable microprocessor control
- Stainless steel frame
- Stainless steel pressure housings
- Stainless steel high pressure manifold
- Stainless steel multistage centrifugal pump
- ABS low pressure manifold
- Stainless steel pressure gauges
- Permeate flow meter
- Reject flow meter
- Permeate conductivity meter
- Integral alarms and system protection
- Service / Alarm / Status display
- Auto start, flush and operation modes

Custom features:

- Stainless steel low pressure manifold
- Electronic flow meters
- High rejection elements
- Chemical dosing

All reverse osmosis units can be combined with Applied Ionics other products to deliver an integrated water purification system. Reverse osmosis systems produce purified water suitable for most applications where de-alkalisation and chemical de-ionisation are currently used. RO removes 95~99% of all ions, silica, TOC and organic species. Combined with polishing technologies such as Liqui-Cel® and electro-deionisation 'chemical free' high purity water systems, suitable for pharmaceutical and semiconductor users, are available.

All reverse osmosis system need to be supplied with adequately treated feedwater. For small systems filtration to < 2 NTU (potable water) combined with softening to prevent scale formation is usually specified. Polyamide membrane are susceptible to attack from chlorine and other oxidants, Applied Ionics standard specification include activated carbon filters as protective pre-treatment. Regular servicing is recommended to ensure optimum performance of the RO system.

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