



EEC GLOBAL OPERATION LLC

EEC DESALINATION PLANTS – WE HAVE YOUR WATER IN MIND

RO & UF



EEC DESAL – SEA – BRAKISH – FRESH WATER RO – UF DRINKING WATER PLANTS

FEATURES

Quality Custom
Design RO - UF
Membrane Plants

Designed With
Membrane
Protection

Skid Mounted Or
Containerized

Energy Recovery
Pumps With
Latest Savings

Fully Automatic
And Easy To
Operate

Competitive Edge
No Compromise
On Components

We Have YOUR
Water In Mind

EEC Global Operation LLC - "EEC DESAL" - When it comes to Drinking Water Plants from EEC, **nothing is standard**. Our RO plants are carefully designed to client specific application so to secure and optimize effluent quality and membrane life. Clients can rest assure that he/she will have the best quality water that a RO plant can produce. Our RO/UF systems are easy to operate and maintain. EEC DESAL systems are designed to last for many years under severe climates. EEC DESAL is skid mounted, fully automatic, and ready to be operated once installed, **when it comes to your water, there is no compromise**. www.eecusa.com



EEC DESAL ASSURE QUALITY DRINKING WATER

Develop New Water Resources

In a single step, EEC DESAL filters, softens and disinfects brackish and seawater resources to produce water that easily meets the WHO's regulations on surface water treatment and safe drinking water. EEC DESAL clears away naturally occurring organics and minerals, as well as contaminants from pollution. EEC DESAL effectively reduces salts, hardness, nitrates, pesticides, color, bacteria, viruses, and the precursors of disinfection byproducts.

EEC DESAL Systems

EEC custom-designs systems, and for certain application, pre-fabricate RO plants for fast delivery and easy integration into any new or existing water treatment facility. With a single electrical interface and the necessary hydraulic connections, EEC DESAL systems are on line delivering demineralized water at capacities from 50 gpm to millions of gallons per day.



EEC DESAL Pretreatment

Pretreatment is typically required to insure stable, long-term RO system performance and membrane life. In general, surface, sea and wastewaters require more pretreatment than well water supplies. Pretreatment may include clarification, filtration, ultrafiltration, pH adjustment, removal of free chlorine, antiscalant addition and 5micron autofilter or cartridge filtration, pending clients budget.

RO Membrane Elements

Based on superior membrane properties (high rejection of TDS, silica and TOC and excellent chemical and biodegradation resistance), EEC uses spiral-wound thin-film composite RO elements manufactured by all the industry's leaders. With large-volume buying power, EEC is a low cost supplier of membranes and system spare parts, antiscalants and membrane system cleaning

chemicals, cartridge filters, and UV sterilizers.



EEC DESAL - RO System Design

Spiral-wound RO membrane elements are housed in cylindrical pressure vessels, with as many as seven interconnected elements per vessel. Vessels piped in parallel constitute a single hydraulic stage, which typically yields 50% recovery of product water based on the feed rate. The first-stage concentrate usually feeds one or more downstream stages. Two-stage systems yield about 75% recovery; three-stage systems yield about 85%, depending on concentrate chemistry. Pressure vessels are staged in a tapered array to provide adequate feed/concentrate flowrates and maintain proper differential operating pressures

EEC completely integrates trailer and skid-mounted systems for simple installation and operation. Standard units are alarmed for feed pressure and equipped for remote operation with automatic start/stop signals from a level sensing switch at the product water tank. Standard components include 5-micron cartridge filter, multistage centrifugal feed pump and conductivity meters. Options include PLC control, additional alarm points, pH meter and control, clean-in-place (CIP) and chemical addition subsystems, variable frequency drive pumps, remote monitoring and comprehensive SCADA packages to enhance system analysis interface.

EEC are on top of latest membranes, pump, energy recovery systems so to secure the latest in technology and optimal systems for our clients.

Typical EEC DESAL RO System Specifications -

System	Brackish Water Skid	Brackish Water Trailer	Seawater Trailer
Production	200 gpm	400 gpm	400 gpm
Installation	8 ft x 22 ft skid	48 ft highway trailer	2 x 48 ft highway trailers
Breaker Size	150 amps	300 amps	2 x 500 amps
Electrical Connection	480 V / 3 phase / 60 Hz	480 V / 3 phase / 60 Hz	480 V / 3 phase / 60 Hz
Power Consumption	3 - 5 kWh/kgal product	3 - 5 kWh/kgal product	12 - 17 kWh/kgal product
Feed Connection (Pressure Regulated)	4" PVC 267 gpm @ 10 psi	6" PVC 533 gpm @ 10 psi	8" PVC 888 gpm @ 15 psi
Waste Connection	4" PVC 67 gpm @ 2 psi (size for 267 gpm)	6" PVC 133 gpm @ 2 psi (size for 533 gpm)	8" PVC 444 gpm @ 2 psi (size for 888 gpm)
Product Connection	3" PVC 200 gpm @ 30 psi	6" PVC 400 gpm @ 30 psi	6" PVC 400 gpm @ 30 psi

EEC's Research and Development team is continuously updating our technology and specifications. Above is a "Typical" example only. EEC Manufacture RO plants for both sea and brackish water. UF systems for tap water and industrial applications. Vissit our web site for more information or send us an email and we will get back to quickly with more information or a quote.

FOR APPLICATION AND DESIGN INFORMATION CONTACT



EEC GLOBAL OPERATION LLC

THE WORLD LEADER IN WASTEWATER PACKAGE PLANTS - GLOBAL PRODUCTION & SERVICE

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All sizes and configuration are available upon request. Visit EEC's Web Site for additional information on different systems and solutions for your specific needs.

www.eecusa.com

EEC PACKAGE PLANTS FOR WASTEWATER. EEC Offer total solutions with complete biological wastewater plants based on MBBR-MBR and are considered to be the world leader. We exclusively selected by US Military, KBR, Weston Solutions, GE, US Embassies, Sonly, Toyota, Yamaha, Fiat, BOSH, NATO, Hilton, Fluor Daniels. We offer global production and services.



More than often EEC design, construct and deliver water solutions at both ends of the projects. We clean up polluted water, recover seawater, then we treat the effluent water at the other side. And we have your budget in mind without compromising on quality.