EEC GLOBAL OPERATION LLC

EEC DESAL – EEC HS BIO TEC – EEC RECYCLERS – EEC EVAPORATORS – EEC

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 Saves Up to 50%

Fully Automatic And easy to Operate

Competitive Edge – No Compromise

EEC Global Operation LLC. "EEC DESAL". When it comes to Drinking Water Plants from EEC, **nothing is standard**. Each plant is carefully designed to client application so to optimize effluent quality and membrane life. Client can rest assure that he/she will have quality WHO approved water, a RO/UF systems that is easy to operate and maintaine, and is designed to last for many years. EEC DESAL is skid mounted, fully automatic, and ready to be operated once installed.
www.eecusa.com

EEC DESAL ASSURE QUALITY DRINKING WATER

Develop New Water Resources
In a single step, EED 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.

EED 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 cartridge filtration.

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.

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

EEC GLOBAL OPERATION LLC

585 South State College Bulv.
Anaheim, CA 926680
USA

E-Mail eec@eecusa.com

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 A Total Solution Water & Wastewater Company
Biological Treatment Plants – Recyclers – Evaporators - Engineering