

مواصفات المحطة

38000 mg/l

<98%

2-40c

مواصفات منظمه الصحة العالميه

صالحه لجميع مواصفات مياه الشرب

10-65%

22v/50hz-380v/50hz

ممبرينات بماركات عالميه

املاح مياه الدخول

نسبه التخلص من الاملاح

درجه حراره مياه الدخول

جوده المياه المنتجه

املاح المياه المنتجه

معدل الاستخلاص

القدره الكهربيه

الممبرينات

SYSTEM PARAMETERS

Feed water salintiy:  $\leq 38000 \text{mg/L}$

Salt rejection :  $\geq 98\%$

Feed water temperature:  $2-40^{\circ}\text{C}$

Produced water quality: in line with "World Health Organization

Drinking Water Quality Guidelines""National Drinking Water Quality Standard"

Product water salinity:  $\leq 600 \text{mg/L}$

Recovery rate: 10-40%

Power supply(available):  $380\text{V}/50\text{HZ}$ ;  $220\text{V}$  ( $440\text{V}$ ) / $60\text{HZ}$

Membrane components: international element brand



## استخدام محطات التحلية

محطات تحليه مياه البحر تستخدم في مياه الشرب والزراعة

## Desalination Uses:

Seawater desalination is mainly to provide drinking water and agricultural water, and sometimes edible salt is also used as a by-product  
Be produced



## INDUSTRIAL SEAWATER RO TREATMENT SYSTEMS

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Industrial RO Seawater Desalination Plant Capacity range between 2m<sup>3</sup>/hour to 2500m<sup>3</sup>/day. If you need smaller than this capacity please see our commercial RO Desalination Machine.

All RO Seawater Desalination Plants are started from booster pump, it feeds raw water to pretreatment tanks. Depends on capacity pretreatment tank size and numbers can be changed. Because of High TDS (total dissolve solid) and salt water's corrosion, we are using FRP or Carbon Steel material for pretreatment tanks. Pretreatment consists of Sand Media Filter Tank, Activated Carbon Filter Media Tank and Softener Tank which has ion exchange resin inside, they are very important for Industrial RO Desalination Machine.

Pretreatment is used to remove large number of suspended solids, iron, turbidity, unwanted color, unpleasant taste, chlorine, sediment, organic contaminants, odors. In pretreatment we can control the follow manual or automatic for Reverse Osmosis Seawater Purification Plant.

After pretreatment water goes to cartridge filter housing, we call it as security filter, most of application we are using FRP or PVC Plastic material for cartridge filter housing or high flow Filter Housing. There is 1µm or 5 µm PP filter in cartridge filter housing for Reverse Osmosis Seawater Purification System.

After cartridge filter housing, water goes to membrane pressure vessel with High Pressure Pump, you have brand option for High Pressure Pump (Grundfos, Danfoss, fedco or golds) and it allows you to adjust your budget. Membrane housing shell inside depends on capacity we have 4040 or 8040 Membranes. Most of our project we are using DOW Filmtec, Toray , Vontron, Hydranautics, LG brand SW RO Membranes.





Membranes, in industrial Brackish Water Desalination Plant, are most important part. They block if parts size bigger than  $0.001\mu\text{m}$  and molecular weight up to 150-250Dalton. It consists of impurities, particles, sugars, proteins, bacteria, dyes, organic and inorganic solids.

Also RO Seawater Desalination Plant can have chemical dosing at pretreatment or post treatment, like antiscaling (antiscalant) , antifouling, pH adjustment, Sterilization & Disinfection chemicals.

In REDAWATER when we check customer water analysis report, sometimes because of scaling and fouling problems, we can use CIP (Clean In Place) System, it wash membrane in membrane housing and make membrane life longer.

### **Parts for Industrial Seawater RO Desalination Machine**

#### **Electrical Power of Industrial RO Desalination Machine**

For industrial Reverse Osmosis Seawater Purification System needs 380V/50Hz/60Hz or . For bigger capacity, because of high pressure pump, it needs 380V/415V 50/60Hz. As regards to your Industrial RO Desalination Machine design, we will check your electrical supply and decide fix power to you.

### Membrane Sizes and Numbers for SWRO Water Treatment Plant

Model Number	Permeate Flow Rate	Membranes	
	Liter/Hour	Size	Quantity
SW-RO-2000L	2000	8040	3
SW-RO-3000L	3000	8040	3-4
SW-RO-4000L	4000	8040	4-6
SW-RO-5000L	5000	8040	5-6
SW-RO-6000L	6000	8040	8
SW-RO-8000L	8000	8040	10-12
SW-RO-10000L	10000	8040	12-15
SW-RO-15000L	15000	8040	20
SW-RO-20000L	20000	8040	28
SW-RO-30000L	30000	8040	40-45
SW-RO-45000L	45000	8040	50-60
SW-RO-100000L	100000	8040	120-150
SW-RO-200000L	200000	8040	240-300

### What is a desalination system?

Some water source like seawater or some underground water or some river has high level salt inside. For high level salt water has over 10000ppm salt inside. Our Industrial RO Seawater Desalination Plant remove this salt from raw water by RO (reverse osmosis) membrane system technology. Because SW RO type membranes salt recovery rate is over 99%. So, you can get accessible, usable or drinkable fresh water. Reverse Osmosis Seawater Purification system most convenient technology to remove salt.

### Operation Specification for Industrial RO Seawater Desalination Plant

Feed Water TDS 10,000 to 42,000ppm	Operating Pressure 48bar to 80bar	Over 50,000ppm Customization Required
Max. Feed Water Temp: 42°C	Operate at Higher TDS Results Lower Recovery	H2S Must Be Removed
pH Tolerance: 3-11	Max. Iron Content: 0.05ppm	Must Have Antiscalant Dosing
Feed Water Pressure: 2.5 to 6 bar	Turbidity Must Be Removed	

Industrial RO Desalination Machine system price is higher than normal fresh water type RO water treatment plant. Because Industrial RO Desalination Machine uses special high pressure pump and this pumps are bigger than low TDS water treatment system's pumps if you compare for same capacity.