

Nataim UK Ltd - Sea and Borehole Water Desalination Plant Facility.

This desalination facility with an alternative water supply that provides a constant supply of drinking water from either a seawater or a borehole water supply source.

From the incoming water to the plant that goes through a rigorous pretreatment process then the freshwater is separated from the seawater using reverse osmosis, with the supply of high-quality drinking water of up to 250,000 litres on a daily basis.

The reverse osmosis plant process (RO) is able produce quality drinking water from seawater. The desalination plant is held in two 40 ft containers with ancillary equipment including incoming water and supply holding tanks, the system which can be installed in both remote and populated areas.

The Pretreatment Procedure.

Before the RO process, untreated water enters into the desalination plant and flows through screens that remove debris, it then goes through a traditional treatment process of coagulation and flocculation. In this process, chemicals are added to the water to make algae, organic materials, and particles, that congregate together so they can be removed more easily before the sand filtration stage, the water then goes through special earth filters to remove, silt and other fine particles, before entering the cartridge type filters of the RO membranes, and removing the remaining unwanted particles that may be still in the system.

The Post Treatment and Delivery of Water Procedure.

The Reverse Osmosis system uses an high pressure force and where the pretreated water goes through the semi-permeable membranes to separate the freshwater and removing the salt water and other unwanted minerals. The size of each RO membrane pores are 001 microns, giving the ability to provide the supply high quality drinking water on a daily basis.

Post-treatment, Blending, and Delivery of Water

After the RO process has been completed approved chemicals are then added to stabilize the desalinated water, and this is ready to delivered from the product water supply tank to the consumer of a daily 250,000 litres of drinkable water.

1. The supply of water to the containerized RO plant for treatment.



2. The RO plant supply of treated water to product water tank.



3. The pre treatment of the water before entering the RO plant.



4. Banks of RO membranes located in a containerised unit.



4. Close up view of RO membranes and high pressure pipe work.



5. The banks of RO membranes located in a permanent building.



6. The multimedia filter system located in a permanent building.

