



RODI systems

Project Photos

Project Information

Client: Confidential

Location: California, USA

Application: MF/UF/RO desalination

Description: The project entailed the design and construction of a containerized desalination pilot plant. The system included media filtration, ultrafiltration, and reverse osmosis. The reverse osmosis component of the plant was divided into two trains to allow greater flexibility in the use of the plant (ie, side by side comparison of different membrane elements).



The system is totally contained in a 40 foot intermodal shipping container. Efficient use of the space inside the container was critical due to the complexity of the treatment system. The system operates from a single 460 volt AC power source.

Due to the quality of the feed water, multiple pretreatment steps were designed into the system. These include an inlet screen, media filters, bag filters, and an ultrafiltration system. All of these components are completely automatic and controlled by a PLC equipped with data logging.





The final pretreatment step before the RO trains is a capillary fiber UF system. This was required due to the fact that the source of the feed water was a harbor subject to high turbidity. The UF service, backflush, and chemically enhanced backflush (CEB) steps were all completely automated.

All low pressure piping is constructed of Schedule 80 PVC to minimize corrosion. All structural components are PVC, fiberglass reinforced plastic (FRP), or stainless steel.



The entire system is totally self-contained in the container and is easily moved from site to site. This allows RODI's client to use the system at multiple installations around the world.