

# CASE STUDY

## RO-500 Series

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**Brackish Reverse Osmosis  
Systems for Food Processing**



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**Made in USA**

 **PURE AQUA, INC.**



# Brackish Reverse Osmosis Systems for Food Processing

**Country:** Egypt | **Capacity:** 2 X 410,000 GPD

## Challenge

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The food processing industry consists of multiple regulatory processes to offer certified products to the public. Water is found in these processes as either an integral ingredient or a supplemental substance. In efforts to abide by the requirements held by the FDA and USDA, the water utilized must be free of all contaminants or in its ultimately pure form. This will also alleviate the concern of elements in the water from effecting the product quality itself. This customer intended to supply the food processing plant with well water and required the TDS to be reduced.

## Solution

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Brackish water reverse osmosis is the ideal solution to purifying water from a well, lake, or river. This complete system includes pre-treatment consisting of multiple units along with features like an advanced PLC and a color touch panel screen. The pre-treatment begins a pre-chlorination system to oxidize the iron & manganese from the well. Then, the water is fed into a multimedia filter to remove turbidity and reduce suspended solids. Next, an activated carbon filter reduces the chlorine levels prior to contact with the RO membranes. Fourthly, a birm filter follows to further reduce the iron and manganese accounts left over. The water then proceeds to be fed into the RO systems and is injected with antiscalant on the way to prevent scaling and fouling from occurring on the RO membranes. These systems were skid mounted for flexible mobility.

## Applied System

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The two RO systems model **#TW-410K-9680** were supplied from our **RO-500 Series**. The Multi-Media (model **#MLF84-A**), Activated Carbon (model **#ACF84**), and Birm Filters (model **#BRF84-A**) were also supplied from our **MF-1000 Series**.

## Project Video

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## Features

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- (9) FRP pressure vessels Codeline rated at 450 PSI
- (54) 8" TFC spiral wound membranes Filmtec model LE-400
- Low- & high-pressure switches
- (2) Flow meters for reject and product line
- High pressure pump Grundfos CRN90
- 5-micron pre-filter with SS housing (SSC-88-316)
- PLC control panel (Siemens S7-1200).
- High pressure piping in SS 316 and low-pressure piping in SCH 80 PVC

## RO-500 Series Product Video

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To learn more about our RO-500 Series product, watch this video!



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