

CASE STUDY

RO-200 Series

Hotel Industry



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Made in USA

 **PURE AQUA, INC.[®]**



Commercial Reverse Osmosis Purifier for Hotel

Country: Ghana | **Capacity:** 15,000 GPD

Challenge

Hotels generate a high consumption of water from amenities to guest rooms. Depending on the location, deriving water from a well requires multiple treatments to supply water of appropriate quality. This well consisted of 5,000 PPM TDS along with extremely high levels of iron and manganese. A systemic compilation of treatments would need to be designed to tackle the different contaminants in the water while preserving the longevity of the system. The required quality for each application is necessary to consider to apply the most appropriate treatment.

Solution

A commercial reverse osmosis purifier was recommended and designed to purify well water for the general application of a hotel. This recommended system includes a six-stage process to achieve the required quality for human use. The process begins by feeding the well water into a prechlorination unit to prep the water for a smooth transition into the following treatments. Secondly, the water is filtered through a multi-media filter to reduce turbidity and the level of total suspended solids (TSS). Next, a greensand filter is included for iron and manganese reduction. Fourthly, the water is fed into a carbon filter to reduce the amount of organic matter. Following these pre-treatment systems is the commercial RO system. The treatments prior to the RO are necessary to remove larger contaminants for the RO membranes to efficiently sift 5,000 PPM TDS and produce water of the most purified form while preserving the longevity of the membranes. Lastly, a post chlorination system disinfects the water in preparation to utilize the water for multiple applications.

Applied System

The system consisted of a prechlorination system (**CDS**), a media filter (**MF-400**), a greensand filter (**MF-400**), a carbon filter (**MF-400**), a commercial RO purifier (**RO-200**), and lastly a post-chlorination system (**CDS**).

Project Video



Features

- 4" TFC spiral wound Filmtec membranes LC HR-4040
- SS304 high pressure tubing
- Low- & High-pressure switches
- 20 GPM Product and reject flow meters
- SS316 inlet solenoid valve
- Pretreatment lockout
- Powder coated carbon steel frame
- 3 HP Corrosion resistant high-pressure pump
- 220V/1Ph/50Hz power supply
- Pre/post-treatment and pump pressure gauges
- FRP codeline pressure vessels
- Heavy duty 5-micron cartridge pre-filter

RO-200 Series Product Video

To learn more about our RO-200 Series product, watch this video!



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