



# Operation & Maintenance Manual

FE & RE Edition

For Iron and Sulphur Removal

# AquaOx FE & RE Edition

## General Information Specification Sheet

The FE & RE Edition, when properly applied, is an efficient and cost effective system for the removal of iron and sulfur. The FE & RE Edition maintains a compressed “air pocket” in the top of the tank while the system is in service. As the water passes thru the air pocket, iron and sulfur are oxidized. Additionally, dissolved oxygen is added to the water. The media bed then removes the iron and sulfur from the water.

A daily backwash will remove accumulated iron and replenish the filter media bed. The regeneration process also adds a fresh air pocket to the system.

Application Parameters	FE Filter Media	RE-Sulphur Media
pH (Minimum)	6.8	6.8
Iron (Maximum)	7 ppm	2 ppm
Sulphur (Maximum)	4 ppm	8 ppm

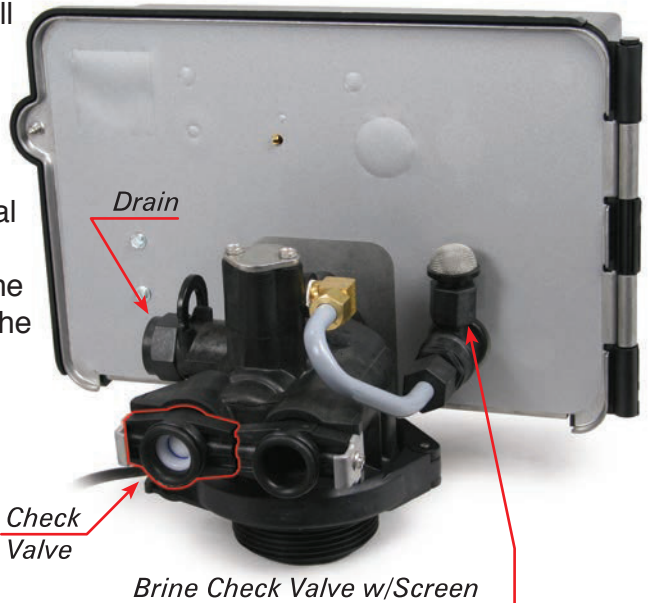
## Installation

- Install the FE & RE Edition after the supply lines to outside faucets (unless outside faucets need to be free of iron). Also, install the AquaOx after any sediment filters or neutralizing filters (ie, calcite, corosex), if applicable.
- The FE & RE Edition should be installed before a water softener or any taste/odor filters (if applicable).
- Insure the inlet check valve is connected as shown to the inlet side of the control valve. The drain line should be installed in accordance with local plumbing codes. Due to the release of the air during regeneration, the drain line must be securely fastened at the end, and anchored throughout the run.
- Insure the brine line check valve with screen is installed on the brine valve. This is the AIR DRAW point of entry.

## System Limitations

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- Chlorine or other strong oxidizers will damage the filter media bed of these systems and should never be used.
- The FE & RE Edition utilizes air, oxidation and filtration for the removal of Iron and Sulfur. This process will leave some air or effervescence in the water. The effervescence may give the water a milky appearance and is



simply excess air in the water. While a certain amount of effervescence will always be present, it may be most noticeable during the first 30 days after installation of the system.

## Regeneration Cycle (59 minutes)

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1. **Backwash** (14 minutes)  
During this cycle, the water carrying the iron runs to the drain. Untreated water is available during regeneration.
2. **Air Recharge** (40 minutes)  
During this cycle, the unit empties the water to the drain and is recharged with air, oxidizing the media. The sound of air being recharged will be heard. Air bubbles should go down to the drain before proceeding to the next step. Adjust cycle time if necessary.
3. **Rapid Rinse** (1 minute or Off)  
During this cycle, water enters the tank, compressing the air into a pocket at the top of the tank.

#### 4. **Brine Refill (Off)**

#### 5. **Unit Returns to the In-Service Position**

**NOTE:** Due to the air pocket, exceeding 80 psi will adversely impact performance.

The frequency and time of regeneration can be changed due to the following reasons.

- Need for the unit to regenerate at a different time of day (DO NOT regenerate any other softener/filter at the same time as the Nelsen AIO, since this will interfere with the regeneration process).
- In conditions of high water usage and/or high levels of iron, the unit may need to regenerate more frequently than once every three days. The unit can be set for daily regeneration or to regenerate every two days. DO NOT set the regeneration frequency for a longer period than 3 days, as the filter medium can become fouled with iron, rendering the unit ineffective.