

# THE CASE FOR H<sub>2</sub>O<sub>2</sub> & ENHANCED OXIDATION

As simple as it may seem, the treatment of contaminated waters is as diverse and complicated as the operations from which it comes. In today's environment, where merely transferring contaminants from one medium to another is no longer acceptable, it is no surprise that a powerful oxidizer that looks like water -- in its appearance, chemical formula and reaction products -- should be so widely used. This is hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) -- a powerful yet versatile oxidant that is both safe and effective. Consider the H<sub>2</sub>O<sub>2</sub> advantages and you'll know why this is the **ONLY** sure way to eradicate iron and sulfur.

**Powerful** - H<sub>2</sub>O<sub>2</sub> is one of the most powerful oxidizers known -- stronger than chlorine, chlorine dioxide, and potassium permanganate. Only fluorine, the hydroxyl radical and ozone are better oxidizers, but all are either deadly poison or cost prohibitive.

Oxidant	Oxidation Potential, V
Fluorine	3.0
Hydroxyl radical	2.8
Ozone	2.1
Hydrogen peroxide	1.8
Potassium permanganate	1.7
Chlorine dioxide	1.5
Chlorine	1.4

**Safe** - Despite its power, H<sub>2</sub>O<sub>2</sub> is a natural metabolite of many organisms, which decompose the H<sub>2</sub>O<sub>2</sub> they produce into oxygen and water. H<sub>2</sub>O<sub>2</sub> is also formed by the action of sunlight on water -- a natural purification system for our environment. Consequently, H<sub>2</sub>O<sub>2</sub> has none of the problems of gaseous release or chemical residues that are associated with other chemical oxidants. And since H<sub>2</sub>O<sub>2</sub> is totally miscible with water, it reverts back to hydrogen and oxygen after the reaction is complete.

**Versatile** - The fact that H<sub>2</sub>O<sub>2</sub> is used for seemingly converse applications proves its versatility. For example, it can inhibit microbial growth (as in the biofouling of water circuits) and encourage microbial growth (as in the bioremediation of contaminated groundwater and soils). Similarly, it can treat both easy-to-oxidize pollutants (iron and sulfides) and difficult to oxidize pollutants (solvents, gasoline and pesticides). Supercharged Hydrogen Peroxide is lethal to iron, sulfur and manganese.

**Selective** - The reason why H<sub>2</sub>O<sub>2</sub> can be used for such diverse applications is the different ways in which its power can be directed -- termed selectivity. By simply adjusting the conditions of the reaction (e.g., pH, temperature, dose, reaction time, and/or catalyst addition), H<sub>2</sub>O<sub>2</sub> can often be made to oxidize one pollutant over another, or even to favor different oxidation products from the same pollutant. In itself, it is a fantastic oxidizer, much better than chlorine and potassium permanganate, **It poses no health hazard and ERADICATES 100% OF THE IRON, SULFUR OR MANGANESE – ALL THE TIME – GUARANTEED!**



- Sulfur-Free Rust-Free Water
- 100% Guaranteed To Work – PERIOD!
- No Hassles, No Worries, No Kidding!
- Built “As Simple as Possible, But Not Simpler” – Albert Einstein



US WATER Model Number	Maximum Flow Rate	Maximum Sulfur Removal	Maximum Iron Removal	Backwashing Filter Tank Size
Oxi-1P	5 GPM	4 PPM	6 PPM	9" x 48"
Oxi-2P	8 GPM	8 PPM	12 PPM	10" x 54"
Oxi-3P	10 GPM	12 PPM	15 PPM	12" x 52"
Oxi-4P	12 GPM	20 PPM	20 PPM	13" x 54"
Oxi-5P	14 GPM	25 PPM	25 PPM	13" X 65"
Oxi-6P	16 GPM	30 PPM	30 PPM	16" x 65"
Oxi-7P	18 GPM	30 PPM	30 PPM	18" x 65"



**Enhancing Lives With Better Solutions<sup>sm</sup>**

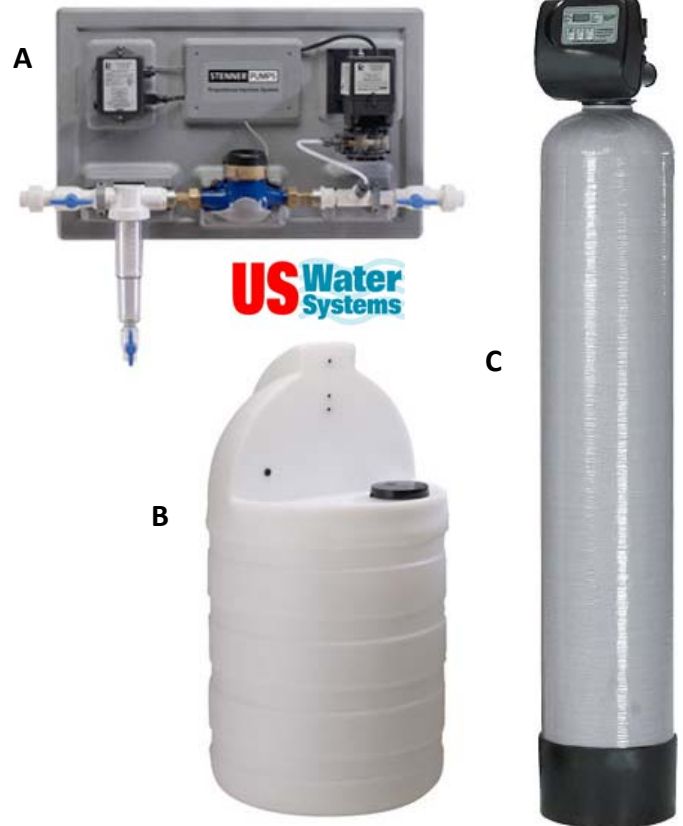
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# OXiGEN™

**Enhanced Oxidation Process for  
Iron, Sulfur & Manganese Eradication**

**Guaranteed 100% Hydrogen Sulfide  
(Sulfur) and Iron (Rust) Removal...**



## **A – PROPORTIONAL INJECTION SYSTEM**

This mounts on the wall and therefore takes up no floor space. It is fully assembled and ready for installation. The inlet is on the left and the outlet is on the right. There is a strainer to remove solid, grit, sand and rocks before it goes through the meter where the flow rate is determined and a signal is sent to the pump injection control. This assures that regardless of the flow (from 1 to 20 GPM) the dosage is constant and proportional to the flow. The *STENNER* peristaltic pump (positive-displacement pump which never needs priming) injects a precise amount of hydrogen peroxide into the *OXIDATION ACCELERATION CHAMBER* which is controlled by a fail-safe meter and electronic injection system which provides the precise amount of hydrogen peroxide into the OAC, no matter how high or how low the flow rate may be. Unlike other technologies, it works under low flow or severe flow rates.

## **B - HYDROGEN PEROXIDE SOLUTION TANK**

The solution tank stores the hydrogen peroxide in a safe container which keeps dust, dirt and kids out. It holds 30 gallons (20.5" Diameter X 37.5" Height).

## **C – Oxi BACKWASHING FILTER**

The *OXiGEN* filter with electronic computer control removes the precipitated sulfur and iron and any excess hydrogen peroxide to deliver iron and sulfur free water. It never needs reprogrammed and has a lithium battery to keep the time for up to 24 hours in case of power outages.

## **UNSURPASSED WARRANTY**

- Lifetime Warranty on Tanks
- 5-Year Warranty on Electronic Control on *OXi* Filter
- 2-Year Warranty on the *STENNER* Pump
- This is often the second system that people buy – after they find out the cheaper system didn't work. **IF YOU WANT 100% IRON & SULFUR REMOVAL, ALL THE TIME, THIS IS IT!**

## **Simply The Best Solution**

***"Since switching, our rust and sulfur problems have totally disappeared."***

- Joe & Marsha, Zionsville, IN

***"Our odor and iron problems are completely gone. Your system is amazing."***

- Rick & Abby, Rockford, IL

***"We have over 40 ppm of sulfur and it really smells! You are the only company who has been able to remove all the odor. We love our water. Thank you."***

-Larry & Becky, Indianapolis, IN

**Iron & Sulfur-Free Water Naturally...Without Adding Harmful Chemicals**

The *OXiGEN* System Also Provides Exceptional Reactions With Iron-Reducing Bacteria or Sulfate-Reducing Bacteria