



PLANET FRIENDLY®
Est. 1994

Preventing Biofilm and Bacteria in Dental Operatory Tubing

By: Greg Steiner

ECOsmarte's natural oxygen and ionic copper system has prevented the formation of biofilms and bacteria in dental operatory tubing successfully since 1997 with process methods developed in 2006.

"The ECOsmarte system can be configured with all forms of conventional water treatment at the point of entry, with or without a conventional water softener and regardless of whether the source water is municipally chlorinated or a conventional well.

Both of ECOsmarte's Minneapolis based dental offices have approximately 400ppm calcium, .3ppm iron and use a 2 cube GAC filter with a one inch valve. One site uses a 48,000 grain softener (Brite Smiles) and the other uses the ECOsmarte electronics for bicarbonate calcium control (Steiner Dental).

"The potential for dangerous biofilm microbes has been noted by federal regulatory agencies including OSHA and is noted periodically in industry trade periodicals."

Sites in Wilmington, NC and El Paso, TX have been effective in warmer water environments.

"ECOsmarte furnishes a Millipore bacteria test kit along with a simple five drop Lamotte EC test kit, with testing assigned to the employee who sterilizes the instruments. The concept is simple. We simply pretend the dental office is an Apollo Lunar Module when NASA used ionization on three week missions to the moon." NASA used the ionization because it was more effective on single cell microbes than chlorine, had a safe and stable residual for humans and was the best technology to combat moon microbes.

The standard ECOsmarte Dental System treats full facility water at 1500 available gallons per day, requires annual purchase of test kits for \$75 and semi-annual anode cleaning furnished by the local dealer for around \$156.

Properly installed, the ECOsmarte electronics prevent the formulation of bacteria in the point-of-entry filters and allow a three year filter life at an installed cost of around \$1000.

Annually the ECOsmarte purification system can treat easily 250,000 gallons for \$500. At 1/5 of one penny per gallon (.002) this is a small price to pay for the safety of the customers and employees.



1600 East 78th St. Richfield, MN 55423
(612)866-1200 (800)466-7946 US, Canada, Mexico
www.ecosmarte.com
www.glasspackfilter.com



ECOsmarte's Operatory Water System Full Facility Model

20-30 GPM Flow Capacity
Larger Models Available

Retail Price: \$5,495 - \$8,495

TECHNICAL SPECIFICATIONS

MECHANICAL & PLUMBING

Operating Press. Max. 150 PSIG
Operation Temp. Max. 120° F
Tank listing and structural integrity requirements only.

OXYGEN ELECTRODES

Proprietary composite material

IONIZATION ELECTRODES

100% Pure Copper
Schedule 80 or Schedule 40

ELECTRICAL

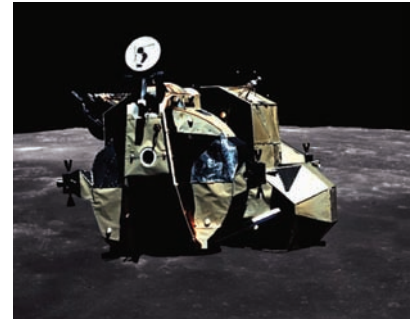
Input Voltage: 110 to 267 Volts, Specify
Output Voltage: 50 VA Class UL CSA
Compliance Power Supply

GPM: Each Unit 1 GPM to 30 GPM

Municipal and Well Water Systems Available
Full Facility Approach.

MODELS

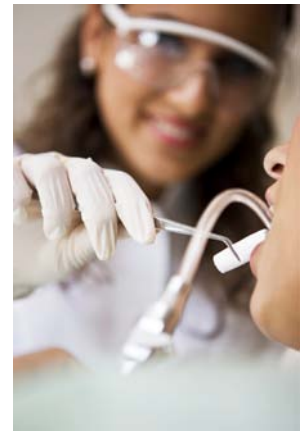
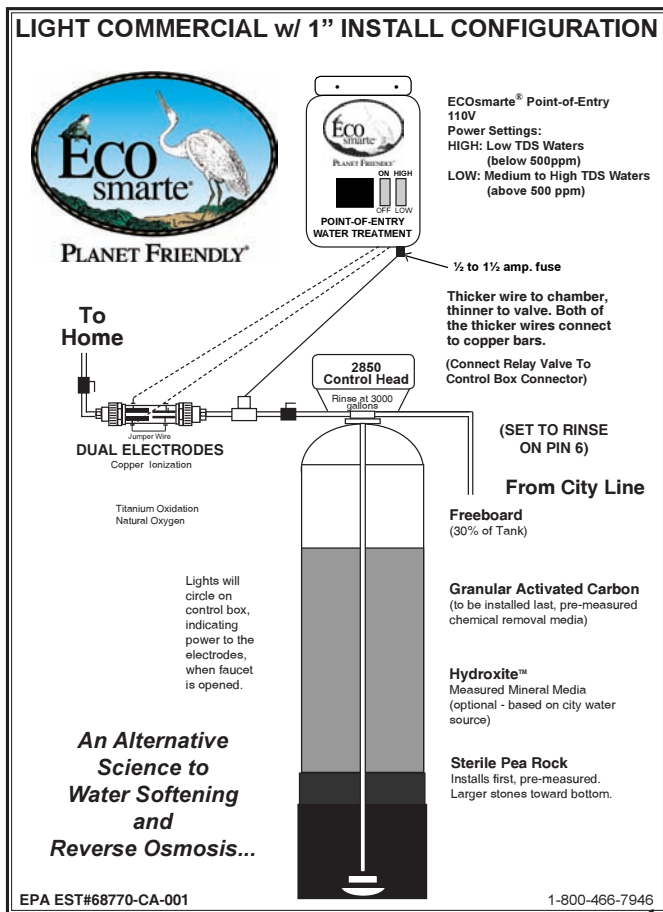
Municipal	Well Water	GPD
ECOPOEM-D	ECOPOEW-D	1,500
ECOPOEMC-D	ECOPOEWC-D	3,000



Using NASA inspired lunar technology, a five minute water test confirms facility protection.



The ECOsmarte system has been Tested and Certified by WQA according to NSF/ANSI 61, Section 8 and NSF Standard 53 for the reduction of Trihalomethanes



Biofilm control in the dental operatory tubing is confirmed by a simple five drop reagent test for copper ppm and test strips for bacteria, included with the system.

Dental Case Study
On Reverse

(ECOPOEM-D and ECOPOEMC-D)



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