



# Product List

The Aerator: .....	1
The Double Aerator:.....	3
Custom Units: .....	4
Other products Health uses:.....	4
NanoGrow <sup>TM</sup> Reactor: .....	5

## THE AERATOR:

These 5 plates are the cornerstone of the EA product line: the aerator is the basic model of the patent pending revolutionary technology known as the Electro-Aeration Nano-Bubble generator. It is composed of 5 plates alternating between 3 cathode (-) and 2 anodes (+). One can add other sets and expand on these plates to attain processing levels of thousands of gallons of water a day. The basic plates have no motors, knobs, instruments and are plugged directly into a 12V DC supply in water. They will not electroshock or harm any life form and can be used with fish:

**Specs:** Minimum: AC 100-240Volt converter to DC amperage load requirement: 50-75 amps in fresh water. Solar panel, preferably 200 Watts but can operate on 1 panel in noon sun. No inverter or battery required. 35 amps salt water. NB: Salt water will produce chlorination. Plates 6" total length 14 inches with harness.

This chlorination can be produced by adding salt water and an acid such as citric acid to produce hypochlorous acid HOCL. This feature is best used with the double aerator.

**Maintenance:** observable deposits can be cleaned with quick dunk in Muriatic, citric, acetic acid and rinse. The plates will last many years as all components, with the exception of the wiring harness, are Titanium.

The Aerator can be ordered on line as a solar unit or with optional DC power supply [STORE \(electroaeration.com\)](http://electroaeration.com)



Video of nanobubbles

## THE TECHNOLOGY WORKS AS A SPRAY SYSTEM. FOLIAR OR SPRINKLERS.

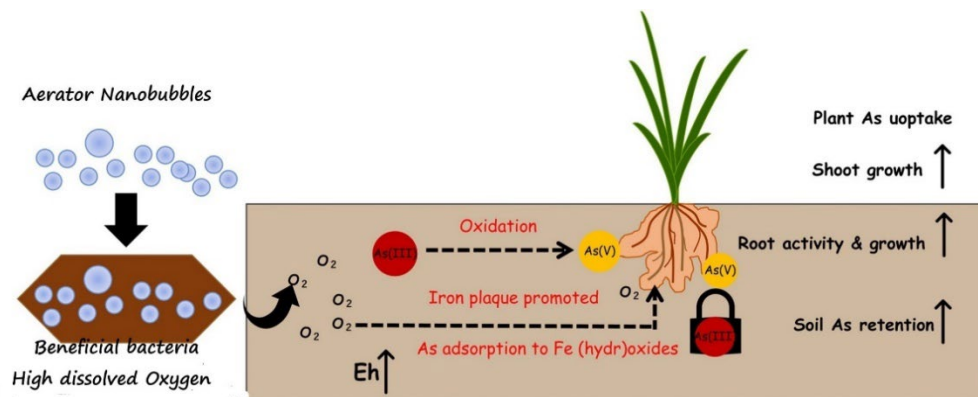
The technology can be used with DC voltage direct solar making it ideal for:

- Nano-bubble production in remote areas: Rice fields, foliar water, lagoon smell abatement, production/greenhouses, vineyards spraying, sprinkler systems for sod production.
- Add salt and create foliar mix for mosquito abatement
- Fit on the back of a trailer for field spraying
- Adapt to garden hose for estate or garden care (units under design)



The aerator water can also be used as a substitute for pesticides in farms large and small naturally increasing yields and quality. A DC power source, such as solar, wind or AC-DC converters can be used to create the fauna & flora safe nanobubble water. Simply add 1 Kg of salt and 100g of citric acid per 30g or 150l and run for a few minutes. Ensure lid is on to not get sick from chlorine gas, let sit covered for at least ½ hour and draw water to a foliar spray. Always run the unit either outdoors or covered indoors at least 30 minutes and let sit for 30 minutes covered.

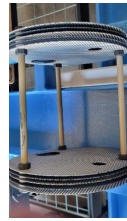
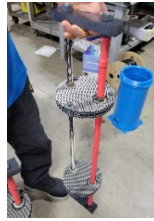
Regenerative Agriculture beneficial bacteria dissolved oxygen production.



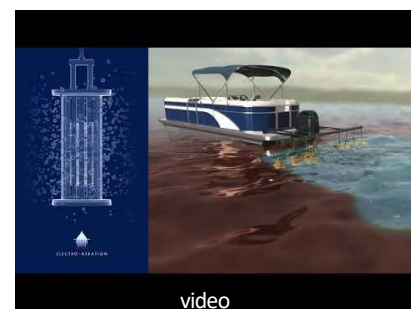
Nanogrow™  
A division of Electro-Aeration Inc.  
Los Angeles, Memphis, Tokyo

## THE DOUBLE AERATOR:

The double aerator is generally used in totes. [STORE \(electroaeration.com\)](http://electroaeration.com)



In a growing environment such as hydroponics, large scale outdoor growing, the **Double** can be plumbed into the irrigation system and the water is recirculated continuously with solar or normal pumps. Plumbed into a hydroponic or greenhouse you will achieve at least 30% increase in yield and 25 % less fertilizer. Most crops come in a week or two early. Ensure you monitor your fertilizer use. You should notice less bugs/aphids. One can use HOCL foliar once a week to eliminate the use of pesticides, by using a smaller unit in a 35gl tank with salt and acid.



Specifications: 6" and 48" long the unit will fit in a 1000 or more liter tote. Mounted with leads running from the top, can be used with a number of solar panels, without inverters or voltage controls. If using a DC power source, ensure 75 amp draw or 50 amp draw for brine water. The **Double** can also be mounted behind a boat to clear away top surface algae infestation

For brine solution and HOCL generation, ensure 2Kg of NaCl per 1000l pH adjust with citric acid to 3-6 pH, depending on water perhaps 250g. Possibly the simplest water purifier in the world, it can be adapted to any type of water and also act as a disinfectant to combat mosquitoes, bacteria and viruses in hospitals, camps, livestock farms.

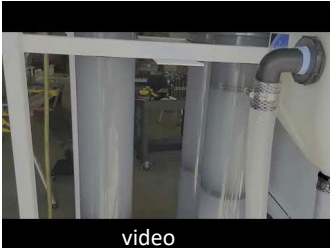


Field Water Purification

7 minute instructional video

## Custom Units:

Electro-Aeration technology can be scaled up to large flowrates in industrial settings such as large farms, metropolitan generation of HOCL, waste treatment options for increasing dissolved Oxygen at bacterial oxygenation sites, chlorine or CLO2 generation for final effluent polish and many other settings.



video



video



Videos: DO ond Negative ORP

Chlorination and DO

Instalation Waste water treatment

Multiple units can be set up for maximum flow rates in the hundred of thousands of GPD with an low operating cost as each tube consumes 1Kh Watt. In the case above, the consumption minus pumps was 4Kw/hr. Capital costs is app \$1000 per GPM, Operational is pennies per minute.

## Other products Health uses:

The technology can be used for homes, gyms or restaurants with a small footprint delivering negative ORP water with proven health benefits.



video



video

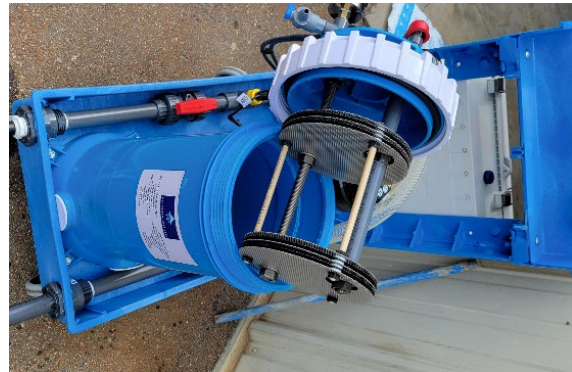
Nanobubble video home unit

Gym Unit delivering nano H2 water

Note: laser lights bounce off nanobubbles, they do not reflect in regular water.

## NanoGrow™ Reactor:

**N.B** While this is the current design, we are eliminating the blue canister in favor of a more industrial look. But the principles are the same.



The roller mounted unit measures roughly 24 inches long by 12" wide. (The roller is subject to availability and color will change) The housing is a filter housing 23" high and 9" wide.

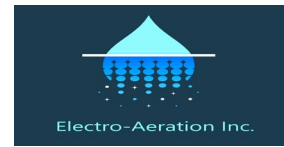
The inflow and outflow fittings are standard US garden hose  $\frac{3}{4}$ . They can be modified to any fitting size for ex -USA we will supply a 19mm inlet and outlet OR whatever the client requires for garden hose flow rate of approximately 5-6 GPM or 20 Liters/minute.

The rods and plates are titanium. Contacting water with these electrified plates generates the nano-bubbles. The oxygen-hydrogen Nano-Bubble generator is composed of 2 housing filters.

The Grey one-or-first filter housing is for Citric acid powder and It's typically set at 0 as we do not need it until there's a problem with the blue reactor plates or for the generation of HOCL. Plate scaling depends on the hardness of the water. Thus, using the descaler could be needed once a month or once a week. Water softeners ahead of our technology do help in very hard water areas. The activation of the decaling is depended on the ORP reading going UP from a negative reading.

Example: unit is running at -20Mv then pops up to +200Mv confirmed with a handheld meter

One just adds 5 large tablespoons of food grade citric acid in the grey tank. This should last many cycles to lower pH to 3 or so. Measure the ORP through the sample valve at the top of the blue tank. Turn on the grey tank to 10 and allow the flow of water to go through to the blue tank, run for 2 minutes: then slow the input flow down to a trickle and run very low flow water for 5 minutes. Turn the grey tank knob to zero. Then return operations as usual.



This acidic water should descale plates. NOTE: the acidic water should not harm plants, however if desired, one can add a diverter valve with the outgoing garden hose and divert to a bucket the acidic water.

When chlorine production is desired, one can add salt (couple of pounds) to the grey filter *even if the housing still contains citric acid*. This combination will generate hypochlorous acid and is very effective against ammonia, bacterial, viral contamination as found in livestock stalls for example. One then turns the knob to 10 for generation of chlorine. One can adjust the strength of the chlorine by manipulating the knob.

While the nanobubble generator should only be used as a polish or final step in water treatment, should there be minor pollutant loads in the water, a simple activated carbon filter is recommended if the water is polluted. CAG filtration at 10-20 GPM is usually residential size.

Do not use petrochemically contaminated water as this will create a film after long term use. One can use glycol and other types of contaminants only *in the chlorination mode*. Even so, please consult with us if you have a need for this type of contaminant remediation.

In post osmosis, one can use it to create nanobubbles and negative ORP water for enhancement of plant growth. One still has to re-mineralize the water after the nanobubble treatment.

In the case of Hypochlorite/Chlorine production: the grey unit is filled with table salt, and the knob turned to 10, and lower once the desired free chlorine level is attained, typically this will be at 2-5 setting This will produce chlorinated water. There is no need to clean the citric acid,

However! If one wants to revert to non-chlorinated water, one must fully clean out the grey tank of all residues with a garden hose.

One measures the effectiveness of the nano-bubble production with an ORP meter.

- When fully operational the ORP reading is negative, if it's positive the unit needs descaling with a descaler agent or citric acid.
- The negative ORP rule does not apply to chlorine production. in this case the ORP should be higher than 500Mv to be considered effective. The first housing filter (grey) is an injector. It has a knob, and that knob should be at 0 for the most part unless acid or salt injection, in which case the minimum setting is all that is needed.

For more information on this grey housing: [Automatic Chemical Feeders Chlorinators and B](#)