



**POWELL
WATER
SYSTEMS, INC.**

**Sundine Enterprises,
Inc.**

Soil & Water Quality
H₂O² = Water-Clone



Cell: 720.363.0548
Email: isolite@ix.netcom.com
Contact: Judd Sundine

The Powell EC system has two main expenses of operation. Electricity is used in the typical range of 2 to 7 KWH per 1,000 gallons treated. The second cost is blade replacement. The typical dissolving rate is 0.2 lbs per thousand gallons treated when steel blades are used and 0.1 lbs per thousand gallons with aluminum blades.

The power supply for the Powell EC unit is oversized to accommodate the occasional extra contamination that often occurs in wastewater treatment. The electrical breaker is recommended to be 50% additional to the rated capacity. The AC power for a 500 gpm power supply is 480 Volts AC three phase and 1,300 AC Amps. The 15, 30, 50, 90, 135, 250, 360, and 500 gpm units are 480 Volt AC input. The 3, 6, and 10 gpm units are 220 Volts AC single phase. The 1.5 gpm unit is 110V AC single phase at 30 Amps.

The compressed air is used in two ways. A small amount of air is supplied inside the chamber to assist the coagulated material to flow with the water and exit the top of the chamber. The other air usage is for pumping. The air diaphragm pumps use about 1.5 cubic feet of air per gallon of water flow at 60 psi.

Chemical usage is limited to pH control and or system cleaning. There is not polymer or flocculants used. This means that no ions are added to the water during the water treatment process.

TDS removal rate is dependent upon the type of ions causing the TDS. Sodium or chloride is not removed significantly with this process. Chrome, zinc, uranium, arsenic, etc are removed in the high 90% range. Please see the attached brochure for removal rates.

When sodium and chloride need to be removed we recommend vacuum distillation, AMS, DAF, followed by R.O.

The Powell EC process makes the contaminants separable from water. The separation can be accomplished with several methods like settling ponds, clarifiers, belt presses, vacuum clarification, decant tanks, etc. Most of the people who are currently treating their water will have secondary separation in place. The Powell EC will simply replace their chemical process. For those who do not have secondary separation we can recommend an application suitable for their application.

If you need additional information please contact me at 720-363-0548.

Thank you
Scott Powell