



# **ELECTROCELL SYSTEMS**

**Industry-changing technology for  
cooling tower/chiller/boiler energy enhancement**



## An innovative, patented side-stream particle precipitator that increases the efficiency and reliability of commercial, industrial and institutional HVAC water filtration systems.

ElectroCell Systems provides customers with their most reliable partner in our people, systems and in all ongoing technical support. Our mission is to enhance Cooling Tower / Chiller / Boiler operation by reducing our customers' energy and water consumption. ElectroCell Systems has been perfected by nearly two decades of R&D and is validated by hundreds of field installations. Our success is built on more than 40 years experience as an energy management, building automation and controls system contractor with a focus on ElectroCell Systems since 1997.



## Improving Profit Margins for Facility Management

ElectroCell Systems saves money, reduces energy and water consumption, and enhances the performance of cooling tower/chiller/boiler operation. A skid mounted, side-stream particle precipitator installation minimizes any disruption to your operation, preventing downtime. We have developed this approach to reduce the risk of our clients' growing Legionella and bacterial concerns. Our system's operation is twofold. First, we remove up to 95% of suspended solids found in water down to one micron. Secondly, we hold dissolved solids in solution until bled out when the mineral levels reach conductivity setpoint.



ElectroCell's commitment to reduce the consumption of energy and water within the facility enhances thermal transfer, giving higher equipment efficiency and providing a cleaner, greener, and healthier operation.



- **Reduce** up to 95% of suspended solids down to **1 micron** with the use of **no media**
- **Save** on the cost of **repair and service** and **decrease** the need for routine **maintenance**
- **Decrease** risk of **bacteria**, including **Legionella**
- **Achieve ROI** in as little as **2 years**

- **Reduce water** up to 25%
- **Increase** thermo **transfer**
- **Reduce** chiller **energy** use by **12-15%**
- **Enhance** chemical **effectiveness**
- **Improve** environmental **impact** and **manage** total dissolved solids

# Our Product

ElectroCell Systems' stainless steel particle precipitator is a fully automated, low flow/high filtration, side-stream filter with low maintenance needs and fully automated PLC. The development of our innovative system improves heat exchanger efficiency and reduces evaporation rates, thus saving up to 25% of make-up water. ElectroCell removes Total Suspended Solids (TSS) and controls Total Dissolved Solids (TDS) in medium to large HVAC and Process systems.



## Dimensions

<b>Weight:</b>	800 lbs (363 kg)
<b>Height:</b>	60" (152.4 cm)
<b>Footprint:</b>	32" W x 96" L Skid Mount (81.28cm x 243.84 cm)

## Operating PSI

<b>PSI:</b>	0-150psi
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## Electrical

220-440V AC 3 Phase 60/50 HZ  
12/6 Amps, 20 Amp Breaker  
3hp Pump

## Piping

<b>Inlet:</b>	2" (5.08 cm) (15-80 gpm adjustable)
<b>Outlet:</b>	2" (5.08cm)
<b>Discharge:</b>	1" (2.54 cm)

## PLC Automation

(typical 1000 Series)

- Fully automated system
- Alarm and trending
- Graphic controls
- Flow totalizing
- Remote communications
- Full integration with existing automation system

## The Industries We Serve

- Manufacturing Facilities
- Public Buildings
- Office Buildings
- Data Centers
- Pharmaceutical Plants
- Health Care
- Education
- CoGen Plants
- Hospitality
- High Rise Residential Condos
- State & Federal Government
- Casinos & Convention Centers

# Advantages and Benefits

This truly innovative, patented side-stream filtration system (particle precipitator) increases efficiency and minimizes risk of damage of HVAC water systems in commercial, industrial and institutional facilities. It addresses open and closed loop chiller/cooling tower applications. A simple and efficient installation saves time and expenses.

ElectroCell Systems enhances the customer's existing chemical program, particularly the halogens that are associated with controlling bio growth, including Legionella.



## Maintenance Savings

A clean system will reduce much of the equipment maintenance and extend equipment life cycles



## Energy Savings

Increasing thermo transfer and system efficiency will net an average energy savings of 12-15%



## Better Payback

Validated ROI of 24-30 months, plus continuous year-after-year savings



## Water Savings

Reduce make-up water by 20-30% by increasing equipment efficiency, focusing on evaporation rates rather than extending bleed cycles



## Enhances Chemicals

Optimize chemical performance by removing 95% of suspended solids down to one micron and controlling total dissolved solids throughout the system



## Carbon Footprint Reduction

Energy and water savings plus enhancing the chemical effectiveness will significantly impact environmental sustainability

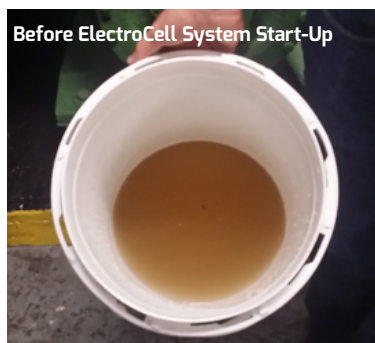


## Simple Installation

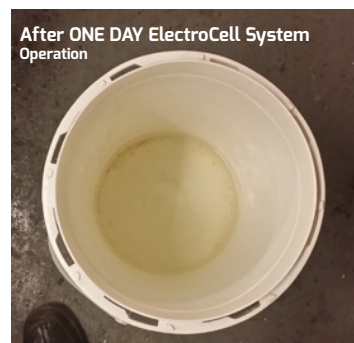
Simple installation with minimal down time— typically less than 2 business days

"If you have a Cooling Tower, you have a problem. ElectroCell is the proactive solution to cooling tower maintenance. The cost of the a system is very modest in relationship to the long-term savings you will receive over the life of your cooling tower, and our clients have achieved an average return on investment in as little as two years."

Paul McLaine, CEO, ElectroCell Systems



Before ElectroCell System Start-Up



After ONE DAY ElectroCell System Operation

**90 day audit, 3000 ton system:**  
**99.702% Reduction in all Particles ppm**  
**745,155 gallons of water saved (\$8,942)**  
**and 291,984 kwh of energy saved (\$23,359)**

We are confident we have a solution to your cooling tower/ chiller/boiler problems, and with an average ROI in two years or less, ElectroCell will pay for itself in savings many times over. Contact us today for your complimentary site survey, and see the tremendous impact that ElectroCell can have in your water and energy savings.



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**SYSTEMS**

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