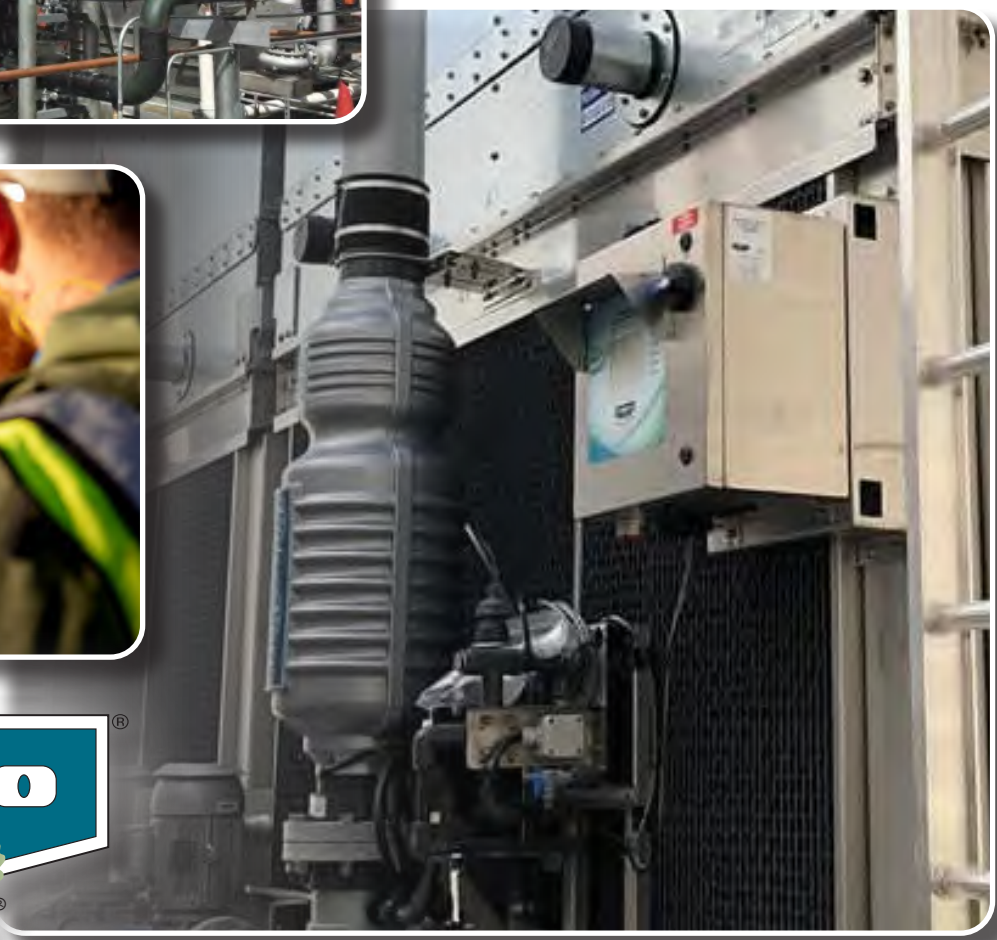
Pulse~Pure®

WATER SYSTEMS



evapco®

PULSE~PURE®

CHEMICAL-FREE WATER TREATMENT SYSTEMS

Complete water treatment system for evaporative cooling equipment

About EVAPCO

EVAPCO for LIFE

EVAPCO is more than a name. We are the global innovator in heat transfer solutions for the commercial HVAC, industrial refrigeration, power and industrial process markets. We pledge to make everyday life easier, more comfortable, more reliable and more sustainable for people everywhere.

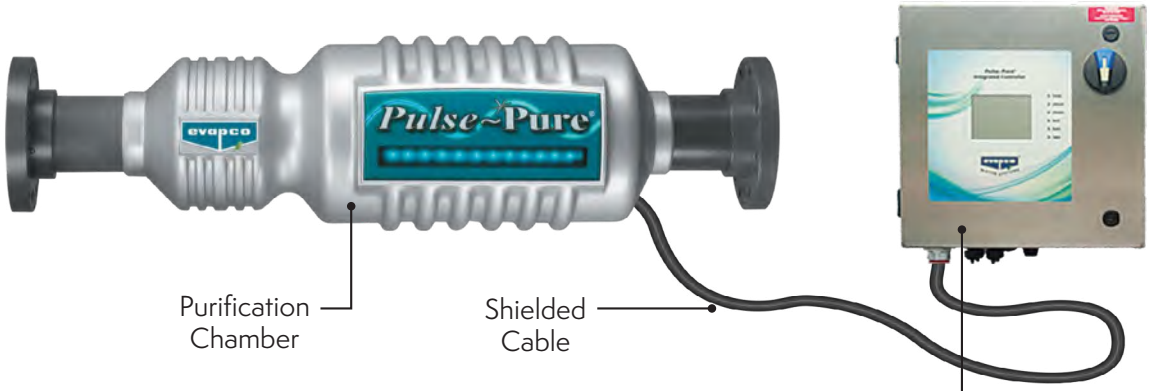
OUR COMMITMENT

We never stop innovating. We set out to find groundbreaking solutions that transform the way the world works for the better. It's why we have more than 48 active U.S. Patents and 116 foreign counterparts. We also guarantee performance and put every solution through rigorous research and testing to ensure maximum efficiency and reliability.

PROTECTING THE ENVIRONMENT

Innovation and environmental sustainability go hand-in-hand at EVAPCO. Our industrial heat transfer equipment not only conserves natural resources and helps reduce noise pollution, but also features recycled steel content in construction. Our stainless steel units are constructed of panels that contain up to 67% of recycled content and our galvanized units contain over 79%. From sound reduction to water conservation to chemical elimination, we are developing new technologies that deliver ultimate operating advantages to our clients while protecting the planet for every generation to come.

Components



Pulse~Pure Integrated Controller 2

- Available for P-3, P-4, P-6 and P-8 chambers
- Integrates a micro-processor driven conductivity controller with a temperature compensated toroidal sensor.
- Single power feed – one 120V or 460V service feed
- USB port can document up to 60 days of operation

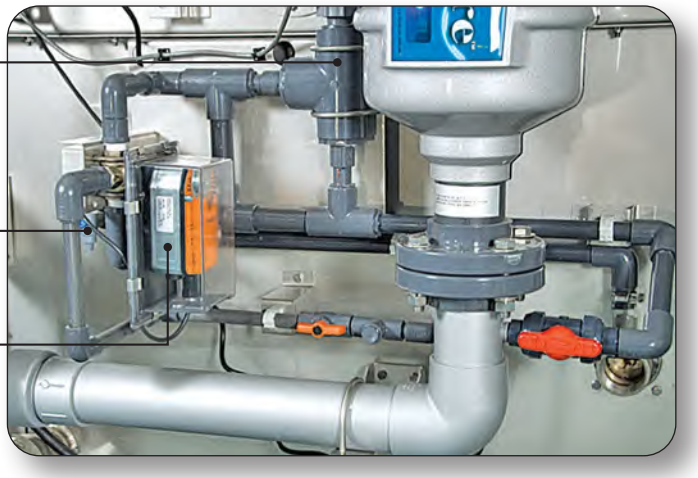
EVAPCO Conductivity Controller 2

Communication Options:

- Modbus
- Ethernet
- 4–20 mA Analog Output

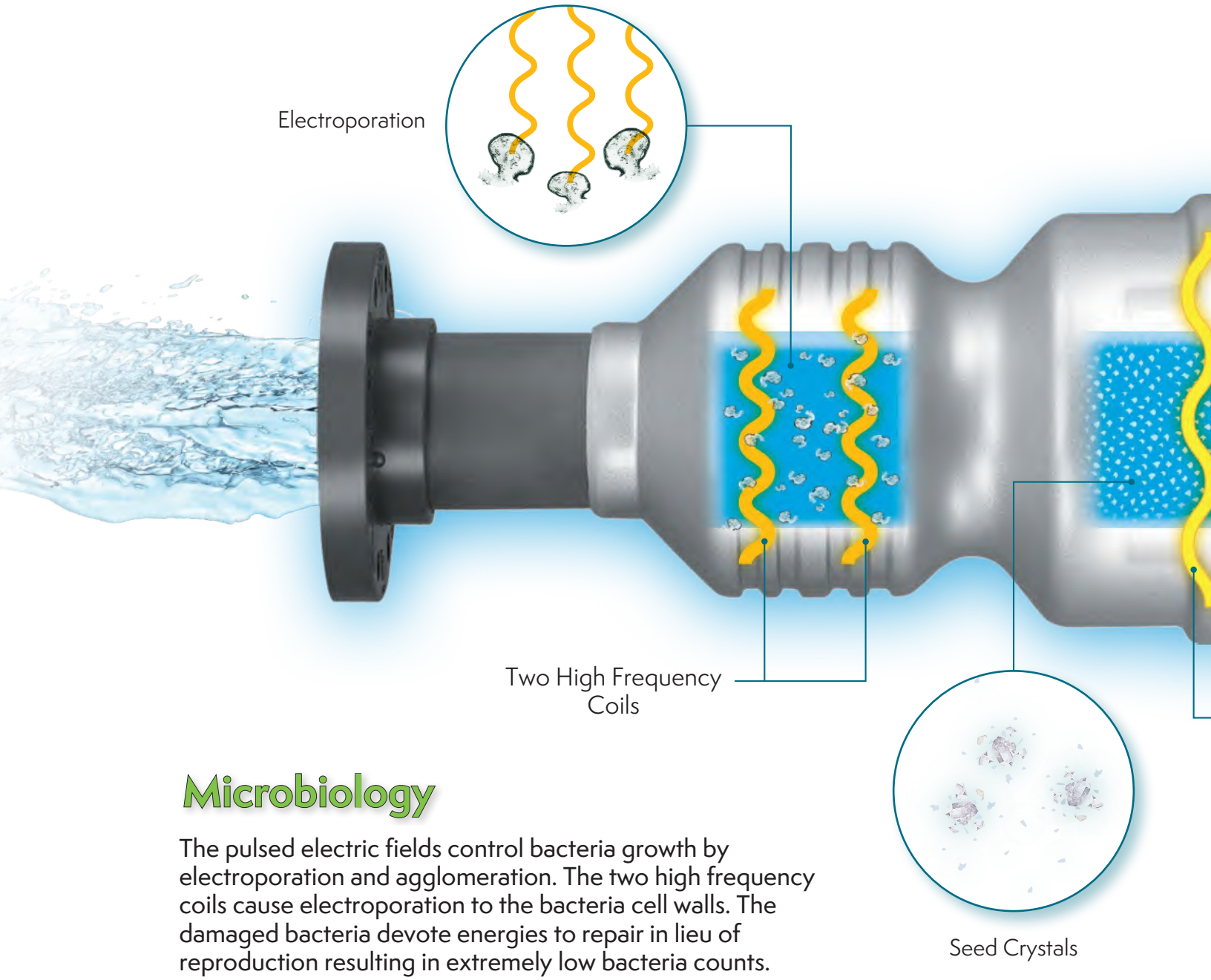
Patented Self Draining Piping

(Reduces the need for heat tracing or insulation)



Principle of Operation

Recirculating water flows through the ***Pulse~Pure***® chamber where pulsed, electric fields physically treat the water to control **Scale**, **Corrosion** and **Microbiological** activity.

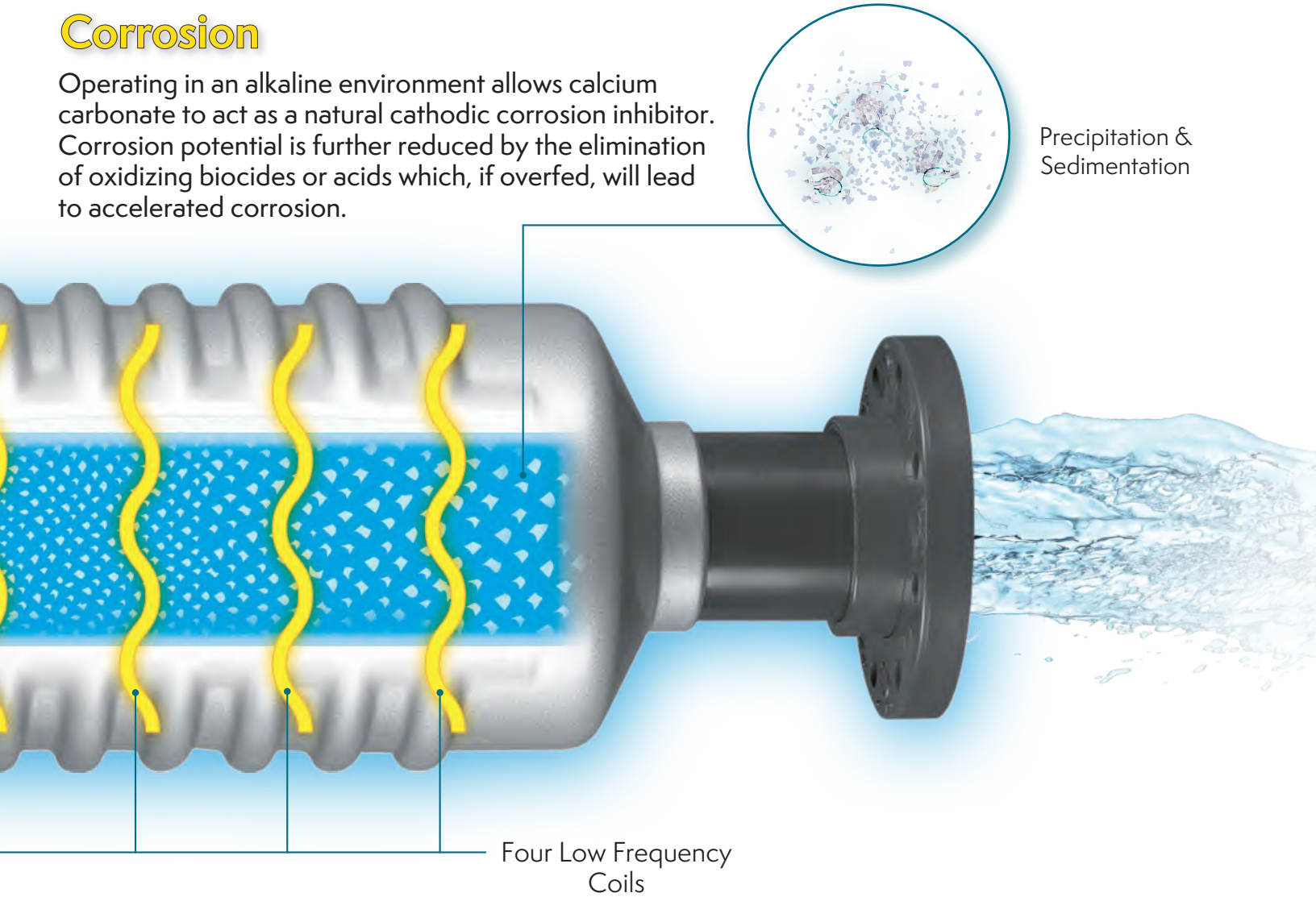


Microbiology

The pulsed electric fields control bacteria growth by electroporation and agglomeration. The two high frequency coils cause electroporation to the bacteria cell walls. The damaged bacteria devote energies to repair in lieu of reproduction resulting in extremely low bacteria counts.

Corrosion

Operating in an alkaline environment allows calcium carbonate to act as a natural cathodic corrosion inhibitor. Corrosion potential is further reduced by the elimination of oxidizing biocides or acids which, if overfed, will lead to accelerated corrosion.



Scale

The four low frequency coils control the formation of mineral scale (calcium carbonate) by creating "seed crystals" from suspended particles in the circulating cooling water. These seed crystals become the preferred nucleation sites for calcium carbonate, not heat transfer surfaces. This process forms a non-adherent powder in the water which will settle out in the basin and be removed by blowdown.

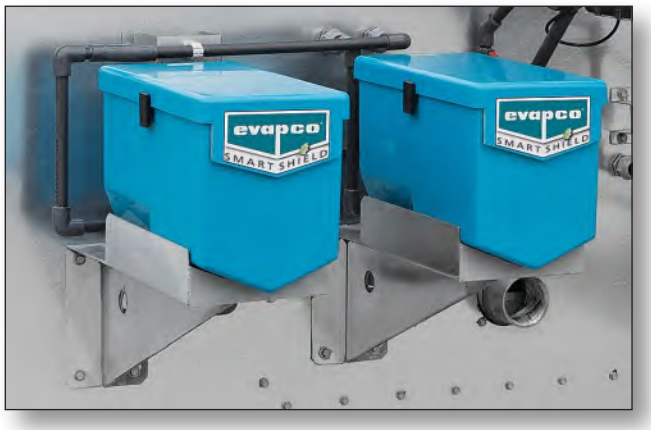
Pulse~Pure Plus

Most ***Pulse*~Pure** systems operate without supplemental chemical addition. There are, however, some local regulations which may require the use of supplemental biocides. For these applications we offer a ***Pulse*~Pure Plus** system that incorporates an oxidizing biocide feeder along with our traditional ***Pulse*~Pure** system.

For Open Cooling Towers or Remote Sumps

Bio-Control Feeder Field Installed

For Closed Circuit Coolers or Evaporative Condensers



Bio-Control Feeder(s) Factory Mounted

Pulse~Pure Plus

- Can Eliminate Treatment Chemicals
- Factory Installed Options on Coolers and Condensers
- Low Energy Consumption
- Routine Monitoring by Water Treatment Partner
- Manufactured and Warranted by EVAPCO
- LEED Points
- Compact Design

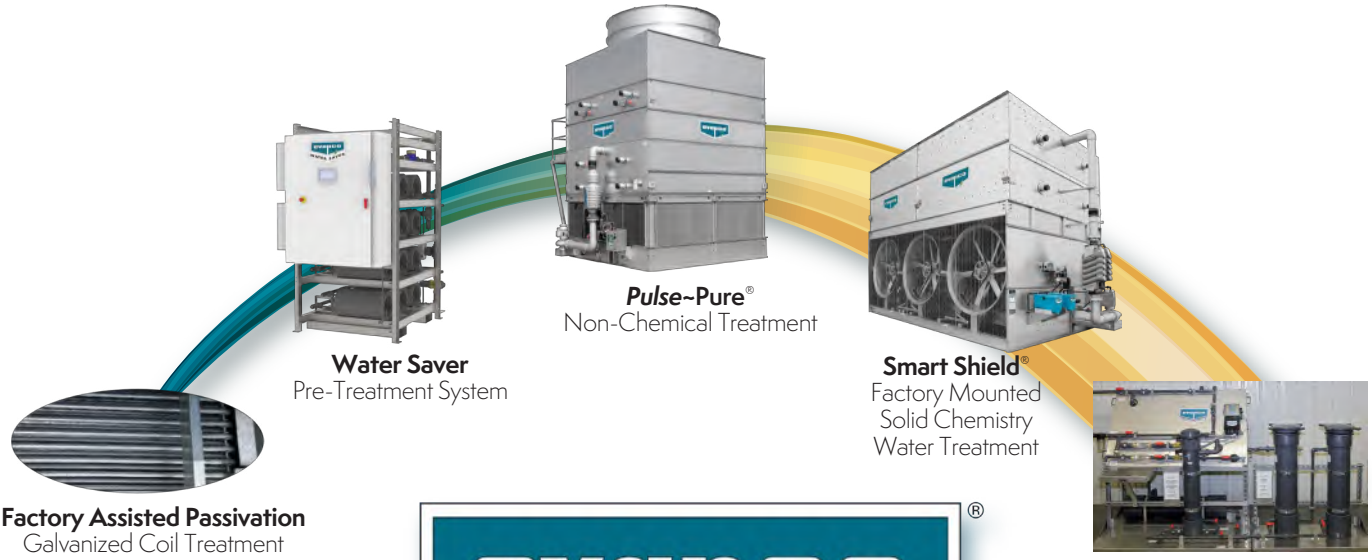
Engineering Data

Model Number	Pipe Size (in.)	Amps (120V 230V 460V)	Max Flow (gpm)	Max OD (in.)	Length (in.)	Weight (lb.)	Factory Installed Cable Length	Field Installed Cable Length	Pulse Panels		
									120 V Weight (lb.)	230 V Weight (lb.)	460 V Weight (lb.)
P-3	3	1.3/0.7/0.3	275	11-1/2	43-1/4	56	8	15 / 25 opt.	45	25	55
P-4	4	1.5/0.8/0.4	475	11-1/2	43-1/4	66	8	15 / 25 opt.	45	25	55
P-6	6	2.5/1.3/0.7	1,100	15	48-3/8	94	8	15 / 25 opt.	45	25	55
P-8	8	4.0/2.1/1.0	1,900	15	48-3/8	120	15	15 / 25 opt.	50	27	60
P-10	10	6.3/3.3/1.6	3,000	20-1/4	55-1/4	163	N/A	15 / 25 opt.	50	27	60
P-12	12	7.5/3.9/2.0	4,200	20-1/4	55-1/4	204	N/A	15 / 25 opt.	50	27	60
P-14	14	9.6/4.8/2.5	5,000	23	66	274	N/A	25	50	27	60
P-16	16	11.3/5.7/2.9	6,700	23	66	340	N/A	25	50	27	60

Notes:
1. Units are designed for a maximum water temperature of 130°F. Units are not designed for boiler applications.
2. Units are standard with 120V NEMA 4X electrical pulse panels. Optional 230V and 460V available.
3. Purification chamber flanges ship mounted for field installation.
4. Pipe assembly is Schedule 80 PVC with a water-resistant purification chamber housing.
5. Units are UL, cUL and CE approved. FCC title 47 CFR compliant and have a Total Harmonic Distortion less than 15%.

P-3 P-4 P-6 P-8 P-10 P-12 P-14 P-16

Full Spectrum of Water Treatment Solutions



www.evapco.com

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for **LIFE**

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