

# ELECTROCHEMICAL WATER TREATMENT

## THE EWT SYSTEM



## Save money. Save water. Save the environment.

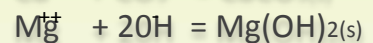
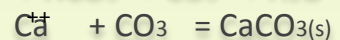
Introducing **EWT** (Electrochemical Water Treatment) – a revolutionary and highly effective treatment for cooling towers, process cooling, air conditioning and other large scale water systems. This proven technology, dramatically reduces the waste, risk and costs associated with other types of water treatment.

**EWT** employs electrolysis to provide continuous corrosion protection for equipment while removing scale-forming minerals from the water. Safe for water systems, **EWT** eliminates the need for costly and hazardous chemicals to treat system water.

### Thus, EWT:

- Protects the environment by not sending hazardous chemicals down the drain with waste water
- Protects your employees and customers from the risks associated with the use and storage of these dangerous chemicals
- Significantly reduces the water needed for your system, as well as water needed for blow down
- Reduces the heavy financial cost of high water consumption and use
- Reduces maintenance repair time and cost

SCALE PRECIPITATION REACTIONS:  $\text{OH}^- + \text{HCO}_3^- = \text{CO}_3^{2-} + \text{H}_2\text{O}$



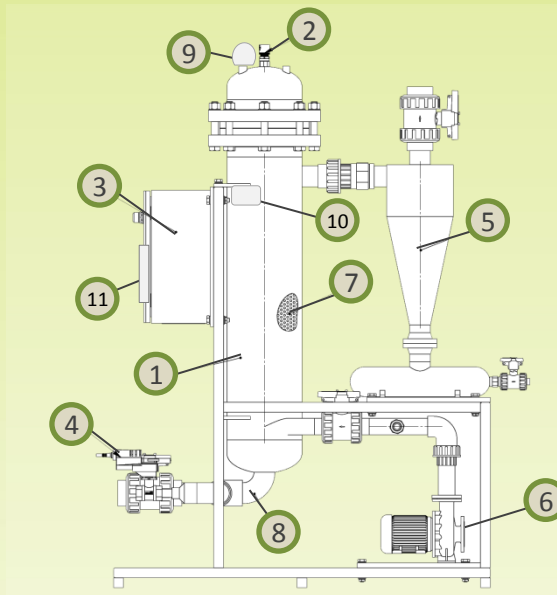
## How EWT works

With an **EWT** Electrochemical system, water to be treated in the reaction tank undergoes electrolysis. In the course of electrolysis, cathodic reactions produce  $\text{OH}^-$  ions that increase alkalinity along the mesh cathode, raising the pH in the reaction tank. The high pH along the mesh cathode causes calcium to come out as calcium carbonate ( $\text{CaCO}_3$ ), commonly known as scale. These scale deposits, when unchecked, adhere to the walls, clog pipes and cause overheating and corrosion.

The **EWT** system forces the calcium carbonate to precipitate in the reaction tank, thus preventing it from forming deposits on heat exchange surfaces and pipes.

### EWT Items Specification

1. P.P Tank
2. Anode
3. Electrical Control Box
4. Solenoid Valve (Optional)
5. Hydro Cyclone (Optional)
6. Circulation Pump ( Optional)
7. Mesh Cathode
8. Manual Drain Valve
9. Gas Release
10. Differential pressure contact
11. Conductivity Meter (Optional)



### The EWT maintenance

Cleaning the scale which has accumulated in the **EWT** system is done by simply extracting the mesh cathode, cleaning it and returning it back into place afterwards.

The **EWT** system includes a differential pressure contact which indicates the change of the pressure when the mesh cathode is getting filled with scale.

The **EWT** system electrochemically removes dissolves mineral so that very little water needs to be wasted from the cooling system.

**EWT** customers substantially reduce both the quantity of water sent to the sewer district and amount required from the fresh water supply.

By removing these minerals deposits, **EWT** dramatically improves your water system's performance.

This increased efficiency will be realized from the onset of operation.

And higher efficiency translates into less cost, less risk, and less wear and tear of machinery, among other benefits.

Note: **EWT** is not ion conditioner. It is not an electric softener.

The **EWT** system is designed to precipitate the temporary hardness on the surface of the mesh cathode and to produce oxidants such as chlorine, ozone and oxygen for Slime and algae control.

## EWT Connection Sketch

