

## COPPER - SILVER IONIZATION SYSTEM FOR HOT WATER SYSTEM

Healthcare facilities, schools and hotels are among the most at risk when dealing with Legionella bacteria. The main source of propagation is the warm water system where contagion mainly takes place through shower steam.

The traditional curative treatments showed their efficiency limits and their numerous disadvantages, including health and safety concerns. H2O Biotech's Copper-Silver Ionization system offers a 100% ecological approach, both curative and preventive, that enables substantial money savings.

### Benefits

- Powerful natural bactericide and algacide
- Prevents infections of Legionella
- Plays two roles: curative and preventive (residual effect) as the ions stay in the water for weeks
- Effective throughout the entire water system, not just on passing water
- Not affected by temperature
- None-corrosive
- Does not destabilize water pH
- Minimal maintenance
- Compact and easy to install



Copper & Silver Ionization system installed in bypass on the hot water main line.

### Which means cost saving!

- Reduces energy costs
- Reduces scaling
- Eliminates periodical network shutdowns, purges, and rinses
- Eliminates periodical curative treatments involving extensive personnel mobilization
- Extends the network's lifespan

**Water temperature  
can be lowered safely!**

Thermal shock and hyper-chlorination no longer necessary

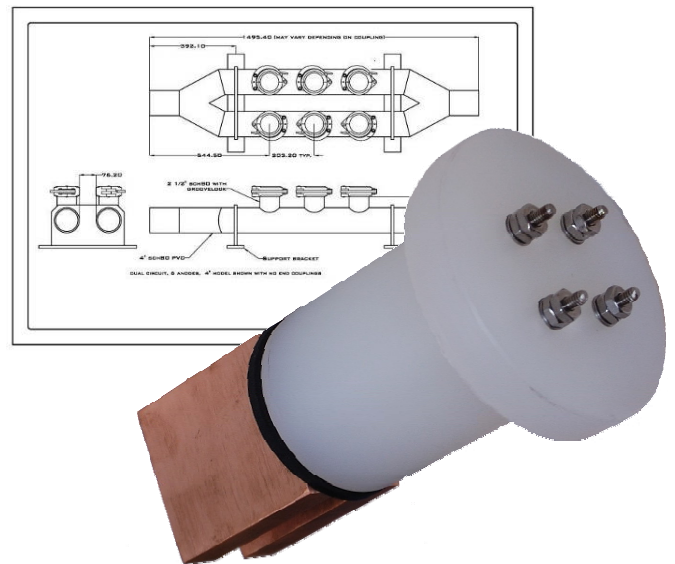


And others approve the use of Copper & Silver Ionization to control and prevent infections of Legionella.

## HOW IT WORKS

H2O Biotech Copper - Silver Ionization Systems work by electrolysis. Electrolysis separates chemically bonded elements in electrodes by passing an electric current through them. The system consists of a reaction chamber and a control box.

- The Ionization Chamber contains up to 12 sets of electrodes made of a copper-silver alloy;
- Water flows between the electrodes and picks up electrically charged ions of copper and silver that are released through electrolysis as Cu<sup>++</sup> and Ag<sup>+</sup>;
- The Cu<sup>++</sup> and Ag<sup>+</sup> ions freely spread out everywhere in the water circulation loop;
- Since the external membrane of algae and bacteria are negatively charged, they attract the copper and silver ions;
- Copper and silver are active against a wide range of bacteria, fungi, algae and viruses, including pathogenic organisms, such as Legionella, found as pollutants of surface water systems. The ions penetrate into them and settle on the DNA, thus entailing the total destruction of the cells;
- Depending on the complexity of the water network and the length of the standing biofilm contamination, it may take a few days or weeks for ionization to remove all traces of Legionella. However, once the system is free of all undesirable bacteria, it will remain decontaminated.



### Datasheet

#### CONTROL BOX

Power: 110-240 VAC 50/60 Hz, 5A

Output: 0-42 VCC, max. 210W

Ripples: 300mV peak-to-peak

#### IONIZATION CHAMBER

Material: CPVC

Inlet/outlet: 2" or 3" (NPT, BSP, flanged...)

Maximum pressure: 130 PSI

Maximum temperature: 100°C / 210°F

Electrodes servicing: Hingelok coupling

#### WARRANTY

Two years for replacement of defective parts (excluding electrodes)

