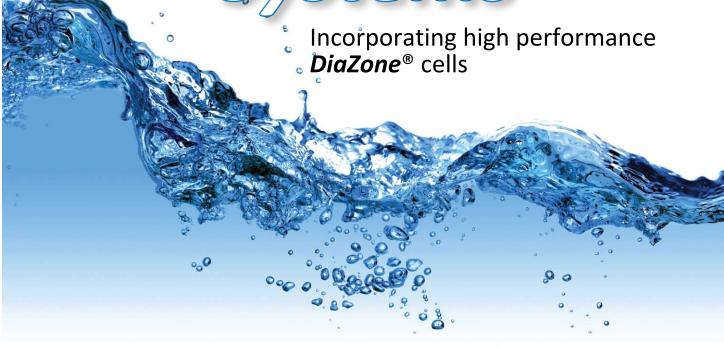


# Ozone Disinfection Systems Incorporating high performance







## A-Zone® Technologies at a Glance

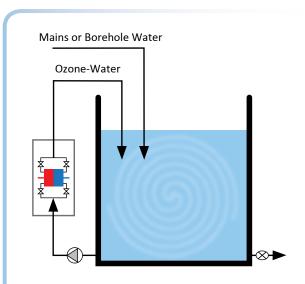




A-Zone Technologies is a specialist in electrochemical reactors incorporating high performance conductive diamond electrodes. Products include state-of-the-art **Dialone** systems which offer a cost effective, robust, reliable, intrinsically safe and environmentally friendly solution for the disinfection and sterilisation of water that addresses the requirements within water hygiene environments.

- Ozone (O<sub>3</sub>) is a molecule composed of three oxygen atoms; it is unstable and highly reactive. The active oxygen (O<sub>1</sub>) breaks away from ozone (O<sub>3</sub>) to form a stable substance with another molecule. If no other molecule is present O<sub>1</sub> will combine with another O<sub>1</sub> to form O<sub>2</sub>. Ozone is a powerful oxidiser and disinfectant that is known to kill all pathogens and microorganisms.
- Our electrolytic ozone cells produce a mixture of ozone (O<sub>3</sub>) and oxygen (O<sub>2</sub>) from the 'O' in H<sub>2</sub>O as water simply flows through the cells.
- Ozone is a very powerful oxidant and it has many commercial and industrial applications. We have designed our *DiaZone®* systems specifically for the disinfection of drinking water from a variety of sources including mains water in managed buildings, borehole water, cooling towers, agriculture and horticulture, healthcare and all other applications where disinfected water is required.
- Ozone improves the taste and smell of water and, after treatment, water is typically colourless, odourless, oxygenated, safer to drink and more palatable than chlorinated water.
- Compared to chlorine, ozone is 10 times more powerful and faster acting and an effective method of inactivating harmful microbes of all types including bacteria, viruses, fungi, algae, protozoa and their cysts (including Cryptosporidium) flukes and worms.

The considerable oxidizing power of ozone makes it a first choice for disinfection!



In this tank circulation system, water is simply drawn from the bottom of the tank, passes through the *DiaZone®* cell and returns to the top of the tank. The ozonated water generated by the cell rapidly diffuses through the body of the water in the tank. Ozone in solution rapidly disinfects water and also sanitises the internal surfaces of the tank, below and above the water line. Tanks treated this way are maintained in a sparkling clean condition!

\*In-line water treatment systems are also available.



The risk of infections and disease spread by contamination is an ever-present concern for many businesses. Our **Diatone** systems provide customers with the benefits of a disinfection system based on ozone that is highly efficient, reliable and intrinsically safe, using no chemicals.

### Our Innovative DiaZone® systems are powerful

- Our systems provide 24/7 protection from pathogenic microorganisms.
- No microorganism can resist or develop resistance to ozone.
- Ozone is at least 10 times more powerful than chlorine as a disinfectant and at least 3000 times faster acting.

### Our DiaZone® systems are highly efficient

- Our systems deliver continuous performance monitoring and data audit trails providing customers with the benefits of a disinfection system minus chemical additions.
- We provide a full service package including system installations and maintenance plan to ensure that our customers get the best from our equipment.

### Our DiaZone® systems bring customers peace of mind by safely disinfecting drinking water

- Ozonated water is entirely safe. It has a short half-life and rapidly reverts to oxygen leaving no residues behind. Unlike chlorine, ozone does not form undesirable halogenated disinfection by-products such as THMs.
- Our company's operations are governed by environmentally sound and strictly enforced procedures that promote responsible product 'lifecycle' management.
- Our DiaZone® systems are economic in operation and intrinsically safe.

### **Technical Features**

- Simple and robust construction
- No moving parts and low maintenance
- Intrinsically safe (low voltage DC system)
- Low current (typically 4 amps per cell)
- No chemicals required (self-cleaning cell technology)
- Low running costs (typically less than 0.2 kWh standard cell)
- Data logging every 60 seconds and upload to secure website
- Continuous performance monitoring and alarms
- Data audit trail available for up to 12 months



### Applications

### **DRINKING WATER**

- Drinking water in managed and private buildings, large and small
- Borehole water and the precipitation of heavy metals such as iron and manganese
- Stored water from all sources including harvested rainwater
- Contaminated water sources in remote locations and, particularly, for disaster relief





### **INDUSTRY**

- Process water for industrial applications and food processing
- Ultrapure and deionised water systems used in pharmaceutical and electronic industries
- Clean-In-Place (CIP) systems in process industries
- Cooling towers and evaporative condensers
- Workplace and production machinery ozone-water (OW) fogging systems

### **AGRICULTURE & HORTICULTURE**

- Feed water for livestock
- OW fogging systems to reduce airborne infections and malodours in intensive production units
- Washing and sanitising systems for milk cooling tanks and storage vessels
- Clean-In-Place (CIP) systems for dairy equipment and tankers
- OW sanitising systems for cheese making equipment and cold stores
- Saturating fogging systems to disinfect produce, improve quality, reduce spoilage and extend shelf life





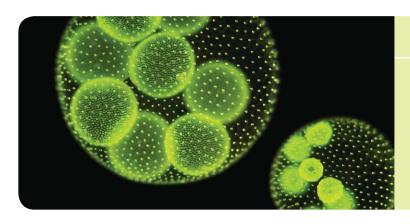
### **FOOD**

- Fresh produce OW fogging to improve quality and shelf life by destroying plant pathogens
- Dairy products OW washing and fogging to destroy pathogenic bacteria, moulds, yeasts and even mites
- Meat, poultry and seafood OW washing to reduce spoilage, increase shelf life and reduce cross contamination
- Sanitising of food preparation areas
- Remove unpleasant odours, particularly fish and seafood smells
- Sanitising cold stores and refrigerators by OW fogging

### **COMMERCIAL**

- Hospitality application including freshening-up meeting places by destroying unwanted odours
- Freshening bedrooms, meeting rooms and toilet facilities by destroying malodorous compounds
- Sanitising and freshening public toilet facilities by destroying unpleasant odours





### **HOSPITAL & HEALTHCARE**

- Whole room fogging systems to destroy pathogenic microorganisms and hospital "superbugs"
- OW washing of medical and dental instruments
- OW hand washing systems

### POOLS, SPAS, HOT TUBS & JACCUZIS

- Swimming pools of all sizes (as a safe and effective alternative to chlorine)
- Spas, hot tubs and Jacuzzis to sanitise and remove unwanted organic compounds





### **TRANSPORT**

- OW fogging systems to extend shelf life of fresh produce
- OW fogging systems to maintain hygiene in chilled containers

### **WATER AID**

The **A-Box**™ is designed to treat and disinfect water by:

- Removing organic matter and particulates
- Killing pathogenic bacteria and micro-organisms of all types
- Removing heavy metals, particularly iron and manganese
- Treating colour and odour, particularly from sulphides
- Improving taste and palatability of water





www.azonetechnologies.co.uk

© 2013 A-Zone

