

facts about roof water



Traditionally viewed as a safe reliable source of domestic water, rainwater can be exposed to many pollutants. A number of national studies have shown that the microbiological quality of roof collected water is usually poor and less than 90% failed to meet national drinking water standards (DWSNZ: 2000).

The pathogens found included E.Coli, Cryptosporidium, Giardia, Salmonella and Campylobacter potentially causing gastrointestinal illness. The likely sources of these pathogens were faecal deposits from birds, possums, rodents, and dead animals and insects.

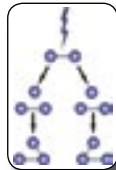
People most at risk are children, elderly people and visitors. Fortunately, all of the contaminants that infect roof water can be successfully treated with ozone. For further details ask for our paper "Almost everything you need to know about roof water treatment".



how does it work?

The heart of the system is the Corona Discharge Cell which uses a small amount of electricity to convert the oxygen in the air into ozone gas.

These oxygen molecules are broken into atoms by the corona discharge in the cell. Single oxygen atoms cannot exist alone without regrouping back to di-atomic oxygen molecules.



During this recombination stage some atoms will regroup into loosely bonded tri-atomic oxygen. This new molecule is called ozone.

A powerful air-pump delivers the ozone to a submerged ceramic diffuser. This system creates millions of very fine ozone-rich bubbles.

As the bubbles rise up through the water the ozone is absorbed in the water and cause large quantities of water to circulate through the tank.

Ozone dissolves about 12 times more easily in water than pure oxygen. It rapidly disinfects and oxidises contaminants before reverting back to oxygen without leaving any harmful chemical residues. This process also boosts the oxygen level in your water making your roof water fresh, healthy and safe to drink.



Model	TD-500	TD-1000
Tank Volume (l)	20,000L	30,000L
Ozone Concentrate	500 g/m ³	1,000 g/m ³
Supply Volts/Watts	220-240 Vac, 100 W	220-240 Vac, 140 W
Weight	8kg	10kg
Shipping Dimensions	400 x 400 x 210 mm	
Operating Temperature	0 - 40 °C	
Protection Class	IP20	
Ozone Generation	High Output Corona Discharge Cell	
Accessories Included	Diffuser, check valve, ozone delivery hose, power cord	

(l) Average house hold conditions apply. The TD-1000 is recommended for larger tanks or higher levels of microbial contamination.

OzonZ™

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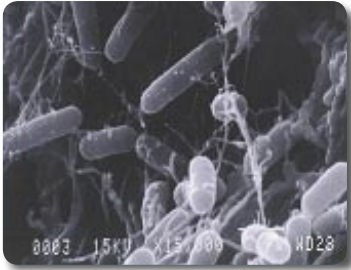
OZONZ™
ozone water & air purification systems

Is your tank water safe?

Have you got a problem with health threatening bacteria, coliforms or viruses - or simply stale, smelly bad tasting water?

**Ozone treatment for
Rainwater Tanks**

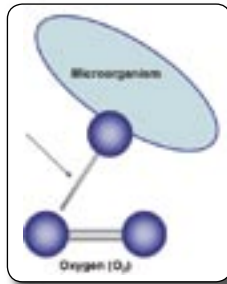
ozone destroys micro-organisms rapidly and naturally



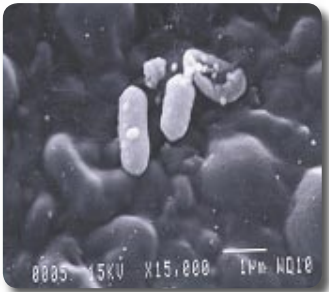
Ozone is a natural gas, a tri-atomic form of oxygen. Being much more effective than chlorine, ozone can do everything that chlorine can do and more.

The weak bond holding ozone's third oxygen atom is what causes ozone to be a very strong oxidant and an ideal chemical-free purification and a disinfecting agent.

When ozone comes into contact with a micro-organism (bacteria, virus, cysts, etc.), the weakly bonded oxygen atom ruptures the cell wall, causing osmotic bursting and cell destruction. This contrasts with other methods which merely prevent microorganisms from multiplying.



The ozone continues to oxidise enzymes and DNA as shown in the electron microscope pictures. The weak bond splits leaving environmentally friendly oxygen as a by-product.



This natural gas is a 3000 times more powerful disinfectant than traditional oxidants like chlorine with no harmful byproducts. Micro-organisms do not build up a tolerance to ozone.

Ozone is world wide approved as an antimicrobial in the treatment, storage, and processing of bottled water and foods.

healthy and chemical free

Ozone produces no harmful by-products. Unused ozone slowly decomposes to normal oxygen and raises the level of dissolved oxygen in the water. This makes the water healthy, clean, sparkling and tasty.

ozone removes odours

Contamination from decomposing bird or animal, decaying organic matter or simply smoke from the fire place often leads to unpleasant tastes and odours. Long periods of high temperature with little rain can produce water that even the 'long time' tank water drinker will find unpleasant.

Ozone rapidly 'burns up' organic molecules, which are the prime source of smelly water, before reverting back to oxygen without leaving any harmful chemical residuals. Other metals such as arsenic are treated in the same way.

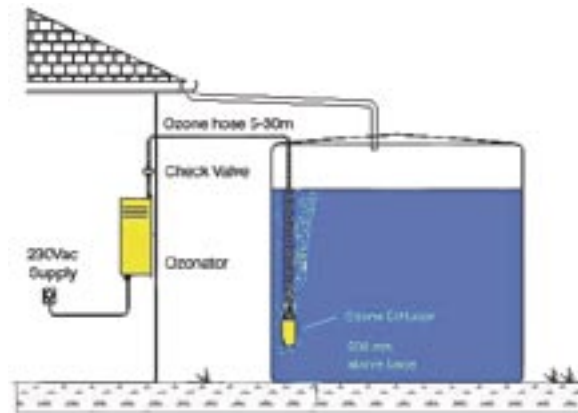
This high level of dissolved oxygen in your tank water produces fresh and great tasting water.

low operating costs

The system uses as little electricity as a household light bulb, about 20 cents per day. The estimated life span of the ozone cell is 5 years. No more regular replacement of expensive UV lamps or expensive chemicals!

easy installation

The OzonZ™ tank ozonators are 'plug and play' systems that require no plumbing and can be easily installed by the home owner. Simply mount the ozonator with two screws on the wall near a power outlet. Lower the diffuser into the tank and connect to the ozonator with the hose supplied.



what others say

It is now more than three years ago since we first installed our OzonZ™ rain water ozonator. We live on a life style block outside Albany. Having young children we were always concerned about the water quality. Fortunately, we made an excellent choice and are since enjoying great tasting, healthy water. The unit is easy to operate and maintain. We have recommended it to many friends and family who are now very satisfied with their water....

Clarke Family, Albany, Auckland



field tested

Sample	Before Ozone	After Ozone	NZ Standard
Faecal Coliforms	2,400	Negative	< 1
Total Coliforms	2,400	Negative	< 3
Standard Plate Count 22	2,100,000	NIL	< 10,000
Standard Plate Count 37	73,000	NIL	< 1,000

Results after before and after ozonation. Details available on request.