

## Technical Information

We produce "state of the art" Ozone Generators from 2 to 400 g/h you will find all technical information about our range of products at this page. The units up to 6 g/h are air cooled and the bigger units are water cooled.

Look at our technical information and choose the best CENTURION Ozone plant for your application or contact us for a Help on your application.

### What are the dimensions for a Centurion Ozone Plant?

It is a cabinet like one electrical panel ready to be screwed on the wall using four screws and beside the Ozone Unit will be Oxygen Generator unit in similar size the weight of the Ozone plant, what is 45 kg and 28 kg for the Oxygen unit.

### What are the requirements for installation?

The unit operates with 127 or 220 V - 50/60 Hz and the pipes connections are made in PVC 1" we will assist you during the installation because the correct installation is the secret of the success and if you made a wrong installation you will not get all benefits of Ozone. We have the experience about 100 installations into Bottled Water industries from factories with small productions to the big ones (150.000/day - 5 gallon bottles)

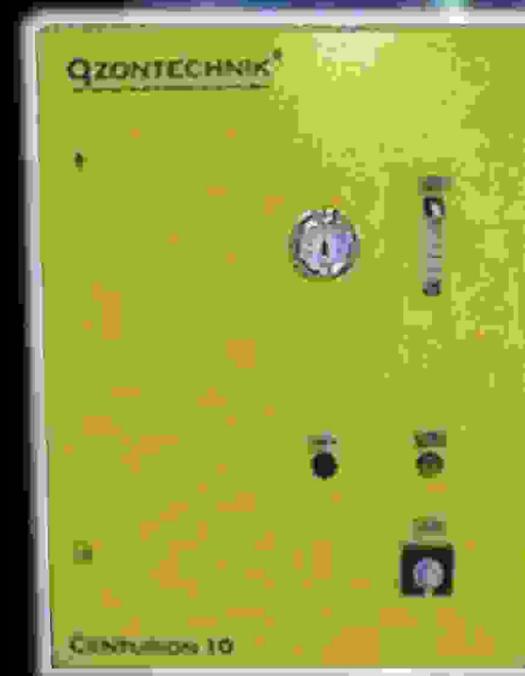
### How much it will cost?

What is the value of your Brand? We know that to build up a name and get customer's confidence is a hard and long process but loose it is very easy. Why taking the risk using other disinfectants that don't do the job and leave us a dangerous gift as THM. Ozone are the product that will enhance the quality of your product and you will be also protecting the environment.

The Ozone was a recognized technology since years, but the cost of this technology was a wall to make it more popular. Now with the development of new methods of production the cost of the Ozone plants is really accessible for several applications. We also offer the rental possibility. Now you don't have excuses. Change for Ozone now and start feeling the difference.

Ozone Generator	CENTURION 3	CENTURION 5	CENTURION 10	CENTURION 30	CENTURION 50	CENTURION 100
Ozone Output(g/h)	3	5	10	30	55	100
Ozone Concentration(g/m3)	3	5	30	55	105	105
Ozone Volume Regulator	Std	Std	Std	Std	Std	Std
Feed Gas	air	dried air	oxygen	oxygen	oxygen	oxygen
Amount of Feed Gas(l/h)	1200	2000	310	700	1000	1200
Air . Compressor	-	o	-	-	-	-
Oxygen Generator Incl. Compressor	-	-	o	-	-	o
Ozone Tube	glass	glass	glass	glass	glass	glass
Cooling	air	air	air	Water	Water	Water
Ambient Temperature	5° - 40°C					
Power Input	200W	300W	300W	300W	500W	900W
Suply Voltage	127/220V 50/60Hz					
Working Hours Counter	Optional	Optional	Optional	Optional	Optional	Optional
Dimension (w x h x d)	600x720x200	600x720x200	600x720x200	760x760x300	-	-
Dimensions Oxygen Generator (w x h x d)	-	-	580x700x300	2x(580x700x300)	3x(580x700x300)	4x(580x700x300)
Weuight(kg)	20	36	54	60	140	140

# OZONTECHNIK®



**LEADING MANUFACTURER OF "STATE OF ART"  
OZONE GENERATORS AND WATER TREATMENT**

REPRESENTATIVE

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## Do you have questions about Ozone?

### What is ozone ?

Ozone is a gas. Ozone is a three atoms molecule of oxygen. Generally is represented as O<sub>3</sub>.

### How is ozone produced ?

In the atmosphere, by lightning's actuating on oxygen. Then, Oxygen (two atoms), is transformed in Ozone (three atoms).

Some Devices, (ozone Generators), produce Ozone "on site", by using high voltage (corona effect), and transform oxygen into ozone, by adding an extra atom. Ozone is not stored or carried as chlorine.

Other devices, produce Ozone by using UV (Ultra Violet) systems, but they are not so effective as Generators.

Ozone is a word which comes from Greek : Ozein = smell.

Ozone is the most powerful oxidant for water treatment, and disinfections process, specially for food and beverage Industry. It is environmental friend, and FDA (Food and Drugs Administration - USA), classifies Ozone as GRAS (Generally Recognized As Safe)

### Will Ozone affect the taste of my water?

If used correctly no. The correct dosage is essential for success as an example take the following.

Polycarbonate Bottles: 0.2...0.4 ppm

>0.5 ppm you will have taste problems (Ozone with the plastic)

>0.2 ppm disinfections are not ensured

PET Bottles: 0.2 ppm maximum

Higher that 0.2 ppm and you will have taste problems

In this case to adjust the Unit for your process is one of the keys for success. Check the range of your plant.

### Can generator achieve a wide range?

Our unit can be adjusted from 5...100%. Note that some units from our competitors have no range or just a small range 60...100 %. Take this into consideration.

### I have heard that Ozone can produce some dangerous products?

This information is partially correct. Some Ozone plants from our competitors, produce Ozone directly from dried air.

Note: Air is a mixture of 21% Oxygen 78% Nitrogen(N<sub>2</sub>) and 1% other gases.

When the electrical discharge happens Ozone is produce in the presence of N<sub>2</sub> . Ozone as a strong oxidant reacts with N<sub>2</sub> and produces a product called NO<sub>x</sub> this substance is suspected of produce Cancer and in Europe these Ozone plants that uses Air are being replaced.

But our plant uses Oxygen produced by the unit itself we just take out the N<sub>2</sub> and no dangerous substances are produced, your process will be 100% safe. Does your unit uses dried air? Change it now...

### What are the advantage of using Oxygen into the Generation process?

The most important was mentioned above but there are more points to be taken in consideration

as following::

1)Gas/Liquid mix are generally difficult to be made if you produce carbonated water you know what i mean. In this case our unit uses pure Oxygen (96%-O<sub>2</sub>) and a more concentrated Ozone is produced compared with units that uses Air (21%-O<sub>2</sub>). In this case less gas should be mixed to your water to add the same g/h of Ozone. As a final consequence you will find that a smaller Oxygen based Ozone Generator will do the same job as bigger Air Ozone generator..

2)The final mixture of the more concentrated Ozone gas will react much faster with your target contaminants Gas bubbles have a higher efficient contact surface than low concentrated Ozone produced with air.

3)Air Dryers are always a problem and in some cases limit the Ambient Humidity goes up to 60%. Our units uses PSA technology to produce Oxygen. No Air dryers are needed. We can operate with humidity goes up to 90% and range of temperature from 40 F to 100 F.

### Is Ozone stronger than other disinfectants?

Yes. Compared with Chlorine ozone kills 99% of 60.000 coliforms/ml contaminated water in 2.8 seconds with 0.1 ppm dosage with the same dosage chlorine needs 15.000 seconds. In using to the bottle washing machines we talk about what we call surface disinfection. The contact time trough the rinsers are really small you need a faster disinfectant. OZONE is the answer. Ozone spectrum of action is really wide even in low concentrations Ozone is lethal against Bacteria's, Spores, Viruses ,Algae and some Fungi.

At the end Ozone came back to the original form as Oxygen (Ozone is one unstable molecule) and it means, that the lifetime of Ozone as gas lasts about 30 minutes.

### In what Industrial Processes we may use ozone, instead Chlorine, getting bigger advantages ?

**Poultry** = Since the feather extraction, to the chiller, the water may have ozone, to avoid contamination. As a result, we have a healthy product, the life time reaches four times the average obtained then if chlorine was used. Weight increases 2%.

**Bottle Washing** = Despite high speed washing bottles equipments, Ozone added to the water, at the spray balls, is able to bring lethal effect for bacteria's within only three seconds. The internal bottle surface, becomes clean from germs, in order to receive the products (beverage, milk, etc.).

**Mineral Water / Bottled Water** = Sometimes "algae" is a problem for bottled water, mainly if exposed to the sunlight. Ozone added in pipes which came from source / wells, before the storage tank, oxidize germs and algae". Iron and Manganese are also oxide at this moment. Filters (Polypropylene), will retain the organics and also Iron and Manganese oxides. Sometimes, oxidate Manganese appears as Permanganate (violet color in the water), thus an extra filter (Activated Carbon), may be installed.

**Green Salad** = Ozone must be added, in several steps of the process, since the ground (or hidroponia), at the green houses, to the final packing process. As a result, the life time increases and less effects on fibers will occur. If chlorine is used, you will spend more time to do it, considering Ozone is 30 x faster. Then by using Ozone, smaller tanks are needed.

**Fish Industry** = No other disinfectant will assure the spectrum of protection that Ozone does and no other will be Environmentally safe. The final microbiological analysis will make you surprised!!!

**Cooling Towers** = Why spend your money on expensive chemicals (biocides, algacides), just plug the Ozone plant and start saving money

**Recycling Industrial Water** = This is the future. Every year the water resources became more expensive. Using Ozone you will have a higher quality water wich can be used by your process once more. The Rhone Poulanc\* Brazil (\*TM-belongs to his owner) are recycling about 150.000 l/h using Ozone technology. Became another Environmental Friend too.

