



PACIFIC WATER TECHNOLOGY

Water Ozone Generator

GSL-2200D

High Flow Three Venturi Ozone System

Includes Oxygen Concentrator





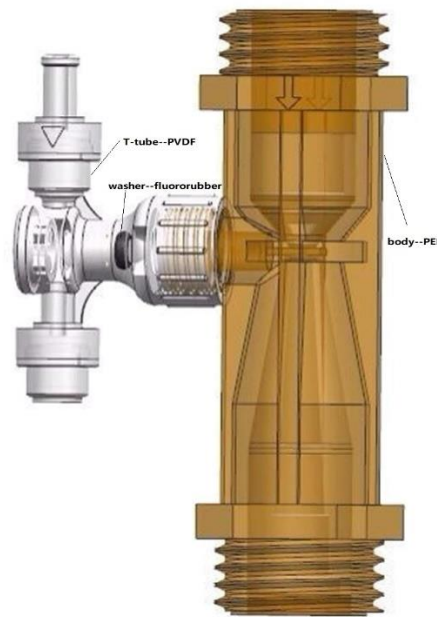
Introduction

Ozone is one of the strongest oxidisers. In practical usage, ozone has shown great effect for disinfection, sterilization, deodorization and decomposing pesticide residual. It's an efficient broad-spectrum fungicide. Ozone can kill bacterial propagule and spore, virus, fungus, etc. The removal rate of Escherichia coli, Streptococcus faecalis, Staphylococcus aureus is over 99%. Ozone can also kill hepatitis virus and cold virus.

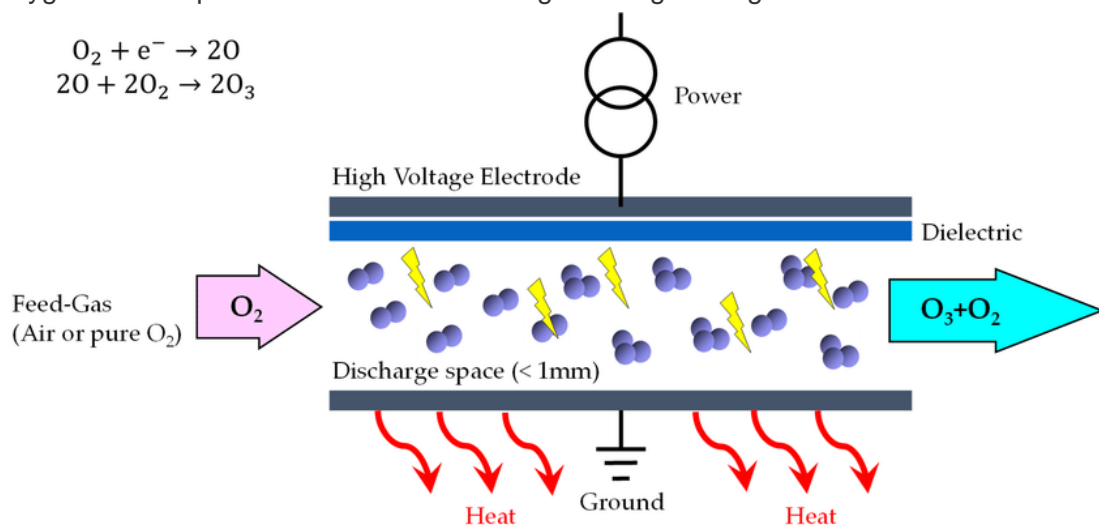
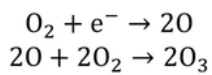
One of the popular applications for ozone is to dissolve ozone into water and produce ozonated water. Ozone is unstable in water with oxidation-reduction reaction all the time, producing active monatomic oxygen, which has strong oxidation function and will decompose bacteria and microbial organic matter in water. Ozonated water can also remove unpleasant food odours; there is no secondary pollution, no residue, toxic free and is environmentally friendly.

Product Introduction

Our wall mounted packaged ozone production system is an intelligent ozone water generator, specially designed for disinfection and sterilization for home and commercial applications. The unique design is user-friendly and facilitates quick installation with minimal adjustment to your existing plumbing. The corona ozone generator produces ozone from oxygen, and includes a venturi system that mixes the tap water with gaseous ozone. The unit relies on ozone injection via three venturis to facilitate higher flow rates. The internal oxygen concentrator produces oxygen at approximately 90% purity. This enables the production of up to 5x higher concentrations compared to ozone generators producing ozone from air. The image below shows one of the ozone compatible venturis, that includes also a back flow prevention check valve.



Ozone is generated by creating a high voltage across a dielectric and passing the oxygen/ air via quarts or ceramic tube through this high voltage field.



The ozone generator operation has been automated, a flow sensor automatically switches the machine on when flow is detected. Conversely, the ozone generator is switched off when there is no flow.

Features and Advantages

- Instant on-demand ozonated water production
- Use ozone quartz tube for high ozone concentration
- Micro gas-water mixing system
- Intelligent micro-pressure switch start-stop system
- Unique wall-mounted design

- Uses tap water, air, external oxygen source
- Fast and effectively reduces pesticide residue, bacteria, viruses and mould
- No toxic NOx by-product
- Continuous output of highly concentrated ozonated water
- Uses DC 5V for control system, ensuring safety
- Easy operation, no daily maintenance required
- Small size, low noise

Health and Safety Risks

Ozone is a powerful oxidant that is used all over the world to purify and sanitize the air and water in the environment. It is an extremely reactive gas molecule, capable of damaging the molecular walls and breaking the macromolecular components that underlie the life of bacterial cells, viruses, protozoa, fungi. It is a bluish-colored gas with a characteristic sour, pungent smell of freshly cut hay. The presence of high levels of ozone damages human health, that of animals and plants and produces the deterioration of materials. The main effects it has on humans are:

- Eye, nose, throat and respiratory tract irritation • sense of pressure on the chest and cough (strong irritating action against the mucous membranes)
- The risks depend on the concentration of ozone present and on the duration of the exposure. The most sensitive individuals, such as asthmatics and the elderly, may be subject to asthma attacks even at low concentrations.

Safe use

Before using the ozone generator, please read these instructions carefully as it represents an essential requirement for the proper functioning of the product and guarantees the SAFETY of the personnel responsible for its use. • this device complies with the safety standards for electrical and / or electronic (CE) appliances; • the power supply cable must be intact, must not be crushed to avoid short circuits and dangerous electrical discharges;

- Keep this booklet carefully. In case of transfer of the device, this booklet must also be delivered;
- if any damage is found during transport, do not put the device into operation;
- No liability is accepted for any damage resulting from improper use not covered by these instructions;
- Disconnect the power supply cable of the device from the electrical socket before proceeding with any check and / or cleaning activity;

- Do not keep the machine in humid places and / or high temperatures;
- Avoid the very frequent use of the device in metal storage warehouses as ozone gas is highly oxidising.
- Keep this electrical device out of the reach of children;

Caution

- Before proceeding with the connection of the device to the power supply, make sure that the voltage corresponds to the required requirements (AC 220-240V / 50Hz);
- High voltage develops inside the device during ozone production.
- Do not use the device in environments where flammable or explosive gases / liquids may be present e electrostatic powder;
- Do not expose the device to rain or splashes of water, to avoid the risk of fire or electric shock;
- It is forbidden to modify and / or tamper with the device and will void the warranty.

Application

Ozonated water of elevated concentrations can be widely used for daily life, food manufacturing, laundry and agricultural purpose. Common application methods include spraying, flushing, Immersing and sparging.

| | |
|----------------------|--|
| Hands disinfection | Use ozonated water to wash hands for disinfection and sterilisation, prevent disease, applicable for industries of high-required hygiene and crowded public places |
| Water purification | Ozonated water of high concentration can be used for water disinfection and sterilisation, decompose and oxidise impurities, remove residual chlorine, oxidise heavy metal ions, increase oxygen levels, decolourisation and decrease water turbidity. |
| Fruits and vegetable | Fully decompose residuals of pesticide and chemical fertilizer, kill bacteria on |

| | |
|--------------------------------|--|
| | the surface, prolong the length of preservation. |
| Fish and eggs | Immersing fish, eggs and meat in the ozonated water, can kill germs and harmful microbe, remove residual hormone, antibiotics, improve flavour in red meat; remove fishy smell and odour causing bacteria, extend shelf life of produce. |
| Beauty and health care | Wash face, hair or shower, aids in exfoliation of skin, alleviates stubborn bacterial skin infections and activates epidermal cells; |
| Living goods and baby products | Disinfection and sterilisation for daily household goods, like tableware, clothes, especially children's toys, milk bottles and underwear. |
| Oral care | Use ozonated water to brush teeth and clean mouth, can prevent bad breath and gingivitis; |
| Family practice | Prevent and help cure gynecological disease caused by bacterial infection and skin disease caused by fungal infection; |
| Pet disinfection | Use ozonated water to clean pets, can prevent germs breeding, remove bad smell and inhibit flea infestations. |
| Household cleaning | Use ozonated water to clean living rooms, kitchen and laundries can effectively kill bacteria, remove bad smell, prevent germs and moulds, etc. |
| Manufacturing equipment | Full high-pressure washing can kill bacteria on equipment surfaces, pipeline internals and packaging containers |
| Poultry farm | Use ozonated water to clean animals and wash farms, can remove bad smell, kill bacteria and germs, decrease disease. |

| | |
|-------------|--|
| Public area | Disinfection, sterilisation and deodorisation in public space, like train stations, hospitals and schools. |
|-------------|--|

Power supply

Rated power: 100 W

Voltage: DC 12V

Input water

Type: tap water

Water pressure: 3-8 kg/cm²

Temperature: 5-20°C

Outlet water

Ozonated water flow: 200L-2000L/H

Ozone concentration: 0.8-3.0ppm

Appearance

Size: 300*330*70mm

Net weight: 4.5 kgs

Note: Solubility of ozone is increased the lower the water temperature.
Minimise backpressure in order to ensure differential pressure across venturi injector.

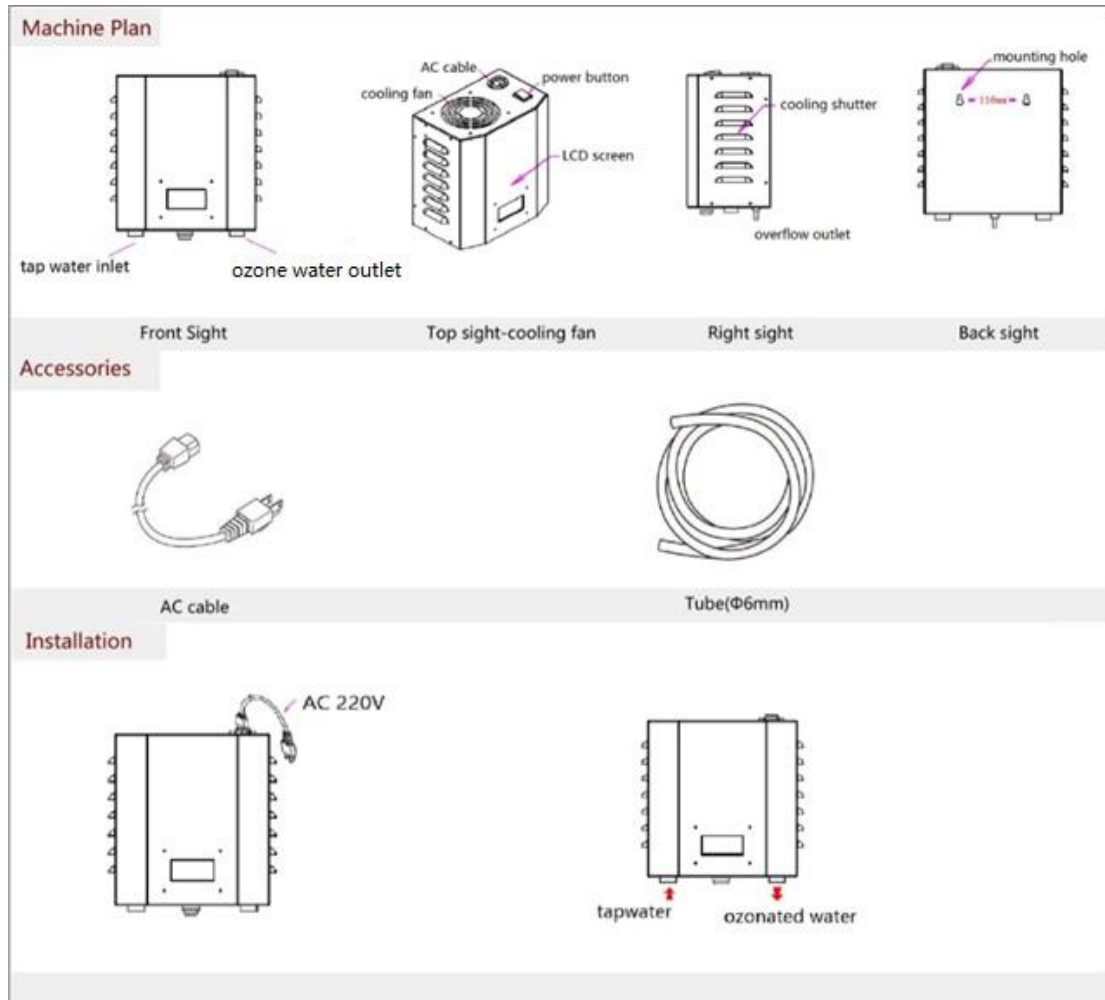
Machine and Connection Details

Screen Display



1. Supply Voltage
2. Current (Amp)
3. Ozone Production On LED
4. Flow Rate(lpm)
5. Fan On Indicator

Note: Screen Display may vary depending on Date of manufacture



Use only ozone compatible plumbing for ozone outlet . Please refer to Appendix for ozone compatibility of materials. A minimum ½” pipe size should be used for inlet and outlet connections.

Maintenance:

This equipment requires minimal maintenance.

- Check and repair any leaks at the water inlet and outlet.
- Any internal leaks should be referred to the supplier.
- Ensure that cooling fan grille is kept clean and remove any dust.
- Ensure electrical cord is kept in good condition.

If the ozone system is not used for extended periods, it is recommended to shut-off the water supply.

Warranty Card

| | | | |
|------------------|--|--------------|------------------|
| Model No | | Ozone output | |
| Client's name | | Phone No. | Purchase Date |
| Client's Address | | | |
| Distributor | | | |
| | Phone | | Zip Code |
| | Receipt No | | Client Signature |
| | DISTRIBUTOR'S CHOP WITH ADDRESS: <div style="text-align: right; margin-right: 50px;">Date:</div> <div style="text-align: right; margin-right: 50px;">Signature:</div> | | |

Note:

1. Warranty period is 12 months from date of purchase;
2. The manufacturer's warranty covers any manufacturing defects due to faulty workmanship or internal electronic parts or ozone parts.
3. Transportation fees for replacing/repairing parts will be the expense of the customer.
4. The Warranty does not cover any modifications or unauthorised repairs by third parties, improper installations contrary to recommendations.

Enquiries:

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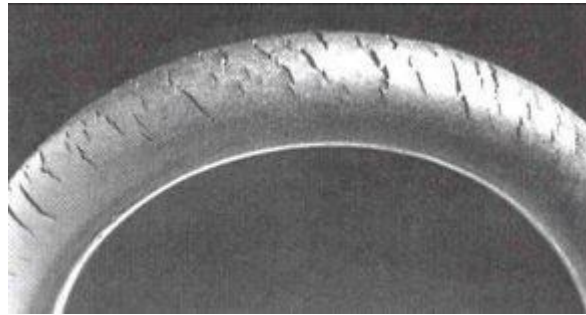
Website: www.pacificwater.com.au

Appendix:

Ozone Compatibility Chart:

Our Rating System

| Rating | Description |
|-------------|---|
| A Excellent | Ozone has **no effect** on these materials. They will last indefinitely. |
| B Good | Ozone has minor effect on these materials. Prolonged use with high concentrations of ozone will break down or corrode these materials beyond usefulness. |
| C Fair | Ozone will break down these materials within weeks of use. Prolonged use with any ozone concentration will break down or corrode these materials beyond usefulness. |
| D Poor | Ozone will break down these materials within days or even hours of use. These materials are not recommended for any use with ozone. |



Ozone cracking in natural rubber tubing

| Material | Rating | Material | Rating |
|-----------------------|--|----------------|--------|
| ABS Plastic | B | LDPE | B |
| Acetal (Delrin®) | C | Magnesium | D |
| Acrylic (Perspex®) | B | Monel | C |
| Aluminum | C (wet ozone) / B (dry ozone) | Natural Rubber | D |
| Brass | B | Neoprene | C |
| Bronze | B | Nylon | D |
| Buna-N (Nitrile) | D | PEEK | A |
| Butyl | A | Polyacrylate | B |

| | | | |
|---------------------------------------|--|---|--|
| Cast Iron | C | Polyamide (PA) | C |
| Chemraz | A | Polycarbonate | A |
| Copper | B | Polyethylene | B |
| CPVC | A (does get brittle) | Polypropylene | C |
| Cross-Linked Polyethylene (PEX) | A | Polypropylene (glass-filled) (GFPP) | C |
| Durachlor-51 | A | Polysulfide | B |
| EPDM | C (wet ozone) / B (dry ozone) | Polyurethane, Millable | A |
| EPR | A | PVC | A (wet ozone) / B (dry ozone) - does get brittle |

| | | | |
|---------------------------------|---|--------------------------------|---|
| Ethylene-Propylene | A | PVDF (Kynar) | A |
| Fiber Reinforced Plastics (FRD) | D | Santoprene | A |
| Flexelene | B | Silicone | A |
| Fluorosilicone | A | Stainless Steel - 304/316 | A |
| Galvanized Steel | C | Stainless Steel - Other Grades | B |
| Glass | A | Steel (Mild) | D |
| Hastelloy-C® | A | PTFE | A |
| HDPE | A | Titanium | A |
| Hypalon® | C | Tygon | B |
| Hytrel® | C | Vamac | A |
| Inconel | A | Viton | A |
| Kalrez | A | Zinc | D |
| Kel-F (PCTFE) | A | | |