Ozone generator

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Water Treatment Equipments

2024

EDITION FOR
REDAWATER GROUP

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ADVANTAGES OF OZONE DISINFECTION

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Ozone as an efficient and broad-spectrum gas disinfectant without residual pollution, has special advantages over disinfectants commonly used in food industry. Compared with chemical disinfectants such as peracetic acid, potassium permanganate, formaldehyde and sulfur dioxide, its bactericidal ability is equivalent to peracetic acid. Ozone can directly sterilize or prevent mildew and keep fresh food, which is dry disinfection, harmless to food and simple. Because of its strong gas permeability, disinfection is not easy to leave a dead angle and will decompose into oxygen by itself, and no residual pollution will be produced.

Ozone can be used to decolorize wastewater, and the chromophoric groups in colored substances are: vinyl, azo, oxidized azo, antelope, sulfur antelope, nitro, sub-brick, etc. Ozone can open their unsaturated bonds and make them lose their color rendering ability.

Ozone can also oxidize cyanide in electroplating wastewater. Ozone affects inorganic metal ions such as Fe^{2+}, $M^{2+}$and so on are all similar to chlorine gas, which is oxidized into stable precipitate. Ozone and activated carbon are used to treat wastewater at the same time. Activated carbon can catalyze ozone oxidation and reduce ozone consumption.

Ozone has a very bad odor removal performance. Its strong oxidizing performance oxidizes various odorous inorganic or organic substances to remove .their odor. The main components of odor are strands, hydrogen sulfide, methyl mercaptan, dimethyl sulfide, dimethyl sulfide and so on. They can be oxidized by ozone in a few minutes to remove odor. The increase of humidity can improve the killing rate.

(Viruses / Bacteria / Odour etc)

Ozone Sterilization Parameter Table

Type of Bacteria	CFU (10pcs / L)	Ozone Water	Working Time	Sterilization Rate
Total Bacterial Count	3.4×10	1mg/L	1min	100%
	N/A	1mg/L	1min	100%
Escherichia Coli	2.4×10	0.3mg/L	0.5min	100%
	1.1×10	0.23mg/L	1min	100%
Staphylococcus Aureus	N/A	0.3mg/L	0.5min	100%
	1.2×10	0.26mg/L	1min	100%
Aspergillus	N/A	1.5mg/L	1min	100%
Yeast Fungus	N/A	1.5mg/L	1min	100%
HBXAg: Hepatitis B Surface Antigen HBXAg	256 (++)	4mg/L	1min	100%

OZONE APPLICATION AREA OUTLINE

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Aquaculture Water Treatment

- Deodorization
- Kill bacteria, inactivate virus
- Remove micro-pollutants, endocrine, etc.
- Remove algae, effectively kill or inhibit the growth and reproduction of algae

Swimming Pool Water Purification

- Reduce organic ingredients
- Kill bacteria, inactivate virus
- Reduce THM
- Reduce the dose of chlorine
- Enhanced clarification effect, high water quality transparency

Industrial Waste-water Treatment

- Improving biodegradability of organic matter
- Decolorization of wastewater
- Remove halides and decompose pesticide residues
- Removal of toxic components from wastewater
- Removal of surfactant and detergents discharged from washing
- Oxidation of AOX and COD after biological pre-treatment

Drinking Water Treatment

- Ozone can enhance the precipitation effect to avoid the conversion of organic matter into chloroform
- Improve the color and odor of the cited water
- Use ozone activated carbon technology to carry out in-depth purification of drinking water
- As a substitute for chlorine for drinking water disinfection

Paper Industry/Pulp Bleaching

- Substitute chlorine in pulp bleaching processing
- Avoiding environmental emissions of chlorides
- Increase the concentration of paper
- Decolorization of paper wastewater
- Reduce COD
- Reduce environmental emissions of surface activators

Food And Beverage Processing

- Disinfection of food and beverages
- Disinfection of packaging material and production lines
- Disinfection of storage and pesticides
- Fresh food preservation
- Space sterilization of food workshop
- Sterilization and disinfection of utensils, and uniform in food processing

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Living-room Air Purification

- Remove odor and formaldehyde from air
- Kill mites, bacteria and virus
- Sterilization and mildew prevention
- Prevention of cross-infection of the virus

GMP Workshop

- Remove odor and sterilization for water
- Sterilization of raw material
- Sterilization of materials, tools, mold, and work uniform etc
- Disinfection of workplace space

Aquaculture Farming

- Deodorization
- Sterilization
- Growth promotion

Chemical Pharmaceutical Industry

- Oxidants in Chemical Engineering
- Strong COD oxidation
- Chemical synthesis in cosmetics and pharmaceutical industry
- Degradation of toxic and chemical components
- Sterilization and disinfection of working utensils, work uniform in pharmaceutical industry
- Sterilization of clean space in pharmaceutical industry

Aquaculture & livestock Water Treatment

- Disinfection of breeding equipment
- Drinking water (ozone water)
- Disinfection of feed
- Treatment of breeding sewage
- Remove odor from space

Exhaust Gas Treatment

- Molecular bond cleavage of bacteria in malodorous gas by strong oxidation
- To destroy the nucleic acid (DNA)of bacteria
- Strong oxidation decomposes oxygen molecules in the air to produce free oxygen
- It has an immediate effect on the removal of odor and other irritating odor
- The waste gas can be converted into harmless and odorless compounds, water and carbon dioxide by synergetic decomposition and oxidation reaction
- Odor in fur, casing and fish processing, and odor removal from rubber and chemical plants

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SS201

Spray With Painting

QLA-3G/5G

VERTICAL OZONE GENERATOR

Features

- Mobile portable design
- The fuselage is made of stainless steel, anti-corrosion and anti-oxidation
- Space disinfection, sterilization of drinking water, sterilization of articles, etc
- The tube has high conversion efficiency, low energy consumption, continuous work and long service life
- Clean dry air feeding, CE certificate
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Technical Specifications

Model	Ozone Output	Power	Purify Area	Ozone Concentration	Dimension (cm)	Packing Size (cm)	NW/GW	Cooling Way	Voltage	Gas Feeding
QLA-3G	3G	60W	20-50m²	15-25mg/L	23*18*46.5	32*25*51 (Carton)	4.5/5.3kg	Air Cooling	220V/ 50Hz	Air Source
QLA-5G	5G	80W	30-70m²				4.8/6.4kg			

Applications

Remove Odour

Hospital

Kindergarten

Purify Bedroom

Bathroom Kill Bacteria

Preserved And Cured Food

Car Store

Taxi Company

Bus Company

Water Tank Disinfection

COMMERCIAL AND INDUSTRIAL

USE AIR SOURCE OZONE GENERATOR

AIR FEEDING OZONE GENERATOR

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QLA-10G-M

SPACE DISINFECTION,WATER DISINFECTION

Features

- Quartz glass tube, corona discharge technology
- Unique air-cooled technology
- High grade stainless steel housing, atmospheric and beautiful, durable
- High conversion efficiency, low energy consumption, long service life
- Compatible with air or external oxygen source
- Air compressor integrated,digital timer

Technical Specifications

Model	Ozone Output	Power	Purify Area	Ozone Concentration	Dimension (cm)	Packing Size (cm)	NW/GW	Cooling Way	Voltage	Gas Feeding
QLA-10G-M	10G	140W	0-200m²	Air Souce: 15-25mg/L External Oxygen Source:60-120g/m³	32*25*52	41*32*57.5 (Carton)	10/11.5kg	Air Cooling	220V/ 50Hz	Air Source (Accept External Oxygen Source)

Applications


Food Processing Industry


Beverage Processing


Cold Storage


Pharmaceutical Lndustry


Pharmaceutical Lndustry


Farming


Drinking Water


Fruit And Vegetable Processing


Swimming Pool


Germ-free Room

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QLA-15G/20G/30G/40G

AIR FEEDING OZONE GENERATOR

Features

- With ozone concentration regulation function
- The fuselage is made of stainless steel, anti-corrosion and anti-oxidation
- Multifunctional disinfection of space and drinking water
- The tube has high conversion efficiency, low energy consumption, continuous work and long service life
- Air cooling + water cooling double cooling system ensures long time stable operation of main engine

Technical Specifications

Model	QLA-15G	QLA-20G	QLA-30G	QLA-40G
Ozone Output	15G	20G	30G	40G
Power	250W	280W	350W	400W
Purify Area	50-100m²	150-250m²	200-300m²	250-350m²
Ozone Concentration	Air Souce:15-25mg/L / External Oxygen Source:60-120mg/L			
Dimension(cm)	40*30*62	40*30*62	40*30*72	50*40*88
Packing Size(cm)	49*37*67.5(Carton)	49*37*67.5(Carton)	40.5*51*77(wooden Box)	50*60*95(Wooden Box)
NW/GW	14.2/16.4kg	15/17.1kg	16.4/25kg	39/44kg
Cooling Way	Air Cooling	Air Cooling	Water-cooling	Water-cooling
Voltage	220V/50Hz			
Gas Feeding	Air Source(Accept External Oxygen Source)			

Applications


Food Processing Industry


Beverage Processing


Cold Storage


Pharmaceutical Lndustry


Pharmaceutical Lndustry


Farming


Drinking Water


Fruit And Vegetable Processing


Swimming Pool


Germ-free Room

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QLA-50/60/80/100/150/200G(CTO)

AIR FEEDING OZONE GENERATOR

Features

- With ozone concentration regulation function
- The fuselage is made of stainless steel, anti-corrosion and anti-oxidation
- Multifunctional disinfection of space and drinking water
- The tube has high conversion efficiency, low energy consumption, continuous work and long service life
- Air cooling + water cooling double cooling system ensures long time stable operation of main engine

Technical Specifications

Model	QLA-50G	QLA-60G	QLA-80G	QLA-100G	QLA-150G	QLA-200G
Ozone Output	50G	60G	80G	100G	150G	200G
Power	600W	650W	950W	1040W	1700W	2300W
Purify Area	300-400m²	350-450m²	400-500m²	500-700m²	500-700m²	500-700m²
Ozone Concentration	Air souce:15-25mg/L / External oxygen source:60-120mg/L					
Dimension(cm)	50*40*91	50*40*91	50*40*123	50*40*123	60*50*138	60*50*138
Packing Size(cm)	50.5*61*99	50.5*61*99	60.5*51*132	60.5*51*132	75*60*150	75*60*150
NW/GW	39/44.3kg	39/44.3kg	42.9/60kg	44/61kg	/	95/108kg
Cooling Way	Water-cooling	Water-cooling	Water-cooling	Water-cooling	Water-cooling	Water-cooling
Voltage	220V/50Hz					
Gas Feeding	Air Source(Accept External Oxygen Source)					

Detail display

Control Panel

Ozone Board System

Cooling Fan


OXYGEN SOURCE
HIGHT CONCENTRATION OZONE GENERATOR

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QLO-10/15/20/30/40/50/60G

OXYGEN SOURCE OZONE GENERATOR

Features

- The machine has built-in oxygen generating unit, high ozone concentration, ozone generating unit, no oil and air pressure,The machine is filtered and the equipment can be powered on.
- The operation is convenient and simple. With the use of the system, ozone is continuously generated and ozone concentration can be adjusted.
- The machine adopts stainless steel case, beautiful, corrosion resistant and oxidation resistant.
- The tube has high conversion efficiency, low energy consumption, continuous work and long service life.
- Air cooling + water cooling double cooling system ensures long time stable operation of main engine.

Technical Specifications

Model	Ozone Output	Power	Ozone Concentration	Dimension (cm)	NW/GW (kg)	Oxygen Flow Rate	Ozone Output Pressure	(m^3/h)	Voltage	Cooling Way	Gas Feeding
QLO-10G	10G	510W	60-80mg/L	50*40*73	32/44.4	2-3L	0.03-0.05	1-3	220V/ 50Hz	Air Cooling	Oxygen Source
QLO-15G	15G	630W	60-80mg/L	50*40*73	35/48	3L	0.03-0.05	3-5			
QLO-20G	20G	730W	60-80mg/L	50*40*91	42.4/51	4L	0.03-0.05	5-10			
QLO-30G	30G	750W	60-80mg/L	50*40*91	44.4/53	6L	0.03-0.05	10-15			
QLO-40G	40G	860W	60-80mg/L	50*40*103	48.1/59	8L	0.03-0.05	15-20			
QLO-50G	50G	945W	80-120mg/L	50*40*115	52/65	10L	0.05-0.06	20-30		Water Cooling	
QLO-60G	60G	1100W	80-120mg/L	50*40*115	55/69	12L	0.05-0.06	30-40			

Applications


Large Workshop


Beverage Processing


Waste Water Treatment


Rinse Factory


Paper Mill


Jeans Faded


Swimming Pool Water Treatment


Silks And Satins Bleaching


Fish Farming


Beverage Water Treatment

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QLO-80/100/150/200G(CTO)

OXYGEN SOURCE OZONE GENERATOR

Features

- Technology corona discharge quartz ozone cell
- Adjustable Ozone output : 0-100%
- Cooling way : air cooled or water cooled
- Inner air compressor and condenser , water filter
- Inner PSA oxygen generator unit .
- Over heat , over temperature , over voltage protection
- Back water prevented solenoid valve
- Ultra-low rate of ozone decay
- Plug and play
- High ozone concentration output

Technical Specifications

Model	Ozone Output	Power	Ozone Concentration	Dimension (cm)	NW/GW (kg)	Oxygen Flow Rate	Ozone Output Pressure	Voltage	Applicable (m^3/h)	Cooling Way	Gas Feeding
QLO-80G	80G	1700w	80-120mg/L	80*55*140	69/100	16L	0.05-0.06	220V/ 50Hz	40-50	Water-Cooling	Oxygen Source
QLO-100G	100G	1900w	80-120mg/L		86/107	20L	0.05-0.06		50-70		
QLO-150G	150G	3200w	80-120mg/L	/	/	30L	0.06-0.08		70-100		
QLO-200G	200G	3600w	80-120mg/L	/	/	40L	0.06-0.08		80-100		

Applications


Large Workshop


Beverage Processing


Waste Water Treatment


Rinse Factory


Paper Mill


Jeans Faded


Swimming Pool Water Treatment


Silks And Satins Bleaching


Animal Water Treatment


Beverage Water Treatment

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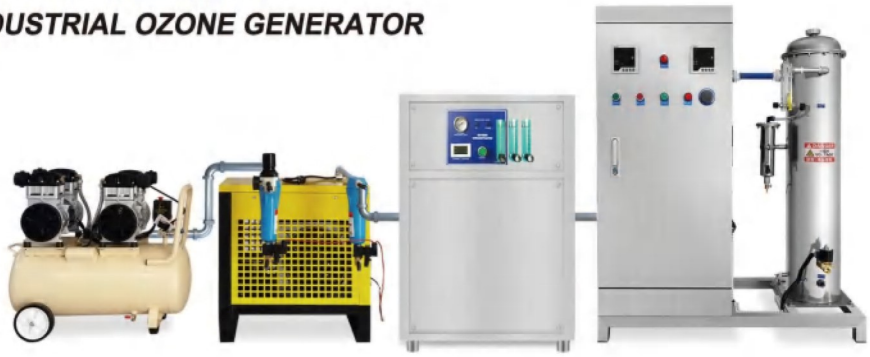
INDUSTRIAL OZONE GENERATOR

QLO-200G-1000G

INDUSTRIAL OZONE GENERATOR



Features

- With ozone concentration adjustment
- Adopting honeycomb ozone unit design, the structure is extremely stable in use, long in service life, high in discharge efficiency, and difficult to damage in case of returning water
- The body is made of stainless steel, anti-corrosion and anti-oxidation
- Large-area space disinfection, water treatment and disinfection, bleaching and bleaching (option of air source or oxygen source according to demand)
- The stable running time is long, the discharge tube of the generator is stainless steel tube, the tube wall is smooth and does not store heat, which is beneficial to stabilize ozone production and has a service life of more than 20 years.
- Air-cooled and water-cooled dual cooling system ensures long-term stable operation of the host
- External high-power oil-free air compressor, cold dryer, gas storage tank, adsorption dryer and other ancillary equipment (can be selected according to demand)

Applications


Large Workshop


Beverage Processing


Waste Water Treatment


Rinse Factory


Paper Mill


Jeans Faded


Swimming Pool Water Treatment


Silks And Satins Bleaching


Animal Water Treatment


Beverage Water Treatment

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OZONE WATER SYSTEM

QL-OWS-10/20/30G(CTO)

OZONE WATER SYSTEM

Features

- High ozone water production
- Advanced air-cooling water cooling
- Easy and simple control,compact design
- Very efficient with excellent mass transfer of ozone
- Over-temperature over current protection
- Integrate ozone generators, oxygen concentrator, gas liquid mixing pump
- Ready to use upon delivery
- Back water protection

Technical Specifications

Model	Ozone Output	Power	Ozone Concentration	Treat Water Flow Rate	Dimension (cm)	NW/GW (kg)	Voltage	Gas Feeding
QL-OWS-10G	10G	800W	1-3ppm	0.4~2.8m³/h	50*40*110	52/66	220V/ 50Hz	Oxygen Source
QL-OWS-20G	20G	1.2KW	1-4ppm	1~3.5m³/h	50*40*131	64/84		
QL-OWS-30G	30G	1.3KW	1-5ppm	1~3.5m³/h	50*40*140	70/92		

Applications

Vegetable Processing

Silks And Satins Bleaching

Alcohol Production

Food Processing Factory

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QL-OWS-10/20/30G

SPRAY OZONE WATER SYSTEM(WITH MIXING TANK)

Prepare high concentration ozone water and clean the breeding ground. Eliminate the odor of the space and reduce the growth of bacteria. Provide environmental sanitation in farming sites.

Features

- Movable, easy to operate, just connect water intet
- High pressure, reducing labor costs
- Safe and hygienic, no secondary pollution, no chemical disinfectants
- Integrate ozone generators, oxygen concentrator, gas liquid mixing pump
- Back water protection
- Ozone water can provide a clean environment and kill bacteria

Technical Specifications

Model	Ozone Output	Power	Ozone Concentration	Treat Water Flow Rate	Dimension (cm)	NW/GW (kg)	Voltage	Gas Feeding
QL-OWS-10G	10G	800W	1-3ppm	0.4~2.8m³/h	90*40*110	70/84	220V/ 50Hz	Oygen Source
QL-OWS-20G	20G	1.2KW	1-4ppm	1~3.5m³/h	90*40*131	82/104		
QL-OWS-30G	30G	1.3KW	1-5ppm	1~3.5m³/h	90*40*140	96/118		

Applications


Pig Farm


Dairy Cow Farm


Chick Farm


Sheep Farming


Duck Farming


Garden


Greenhouse Planting


Orchard

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PIPELINE TYPE OZONE GENERATOR

QLC-20/40/60G

PIPELINE TYPE OZONE GENERATOR

Features

- Intelligent remote control, 0-24Hr intelligent timing.
- Easy installation and maintenance, simple operation and cost saving.
- Adopting air cooling technology, it can work continuously for a long time.
- The ozone delivery distance is far away, the distribution is uniform, and the sterilization efficiency is high.
- The external case is made of stainless steel, corrosion resistant and cost saving.

Technical Specifications

Model	Ozone Output	Power	Ozone Concentration	Dimension (cm)	NW/GW (kg)	Air Blower Flow	Treat Air Flow	Applicable Area	Voltage	Cooling Way	Gas Feeding
QLC-20G	20G	180W	42-50ppm	40*30*62	17.6/19.8	300m³/h	7000+	400-600m³	220V/ 50Hz	Air Cooling	Air Source
QLC-40G	40G	350W	70-85ppm	40*30*62	17.8/20	300m³/h	10000+	800-1200m³			
QLC-60G	60G	380W	125-130ppm	40*30*62	18/20.2	300m³/h	15000+	1200-1800m³			

Detail Show


LCD Panel


Circuit Control System


Cooling Fan


Ozone Output Port

Applications


Pharmaceutical Factory


Cosmetic Workshop


GMP Workshop


Commercial Klitchen


Production Workshop


Poultry Farms

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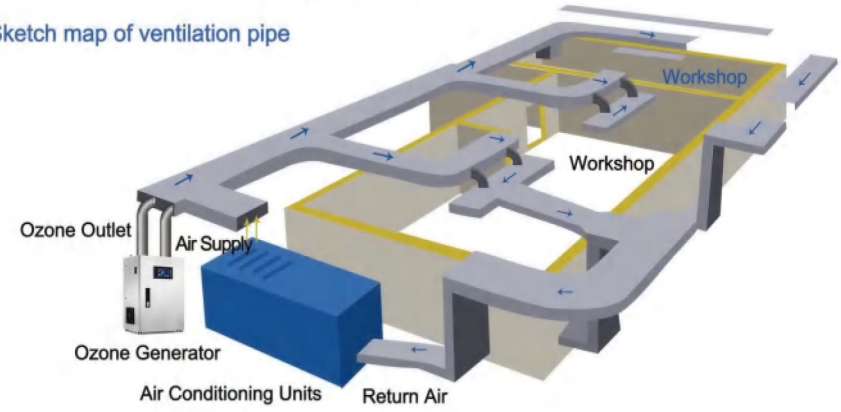
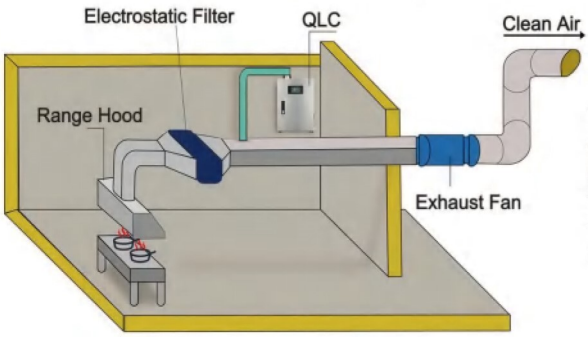
Piping organization system diagram

Pipeline ozone disinfection: The ozone produced by the ozone generator is piped into the air duct or air duct of the central air conditioning system, and the ozone is transferred to the workshop which needs to be disinfected by the wind of the space. Then it is sent to the clean areas, or the ozone is added directly to the sterilized space. The ozone is dispersed in the clean areas by multi-point design.

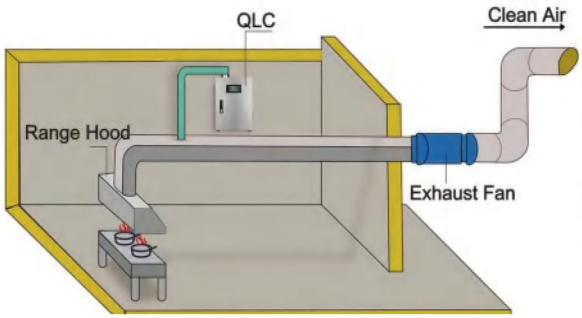
① Sketch map of ventilation pipe



② Schematic diagram of kitchen fume pipe



Wall-mounted installation, easy to operate, just connect the ozone outlet pipe to the fume pipe, in order to extend the life of the machine, as far as possible to install the machine in a dry and ventilated environment.



Wall-mounted installation, easy operation, ozone machine before the plug-in static filter effect is better, in order to extend the life of the machine, as far as possible to install the machine in a dry and ventilated environment.

OZONE DISINFECTING CABINET

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QL-S-40/60/80/100/500L(CTO)

OZONE + UV (CUSTOM TYPE)

Features

- Customizable timing function
- Customizable UV / high temperature / ozone three effect one
- Customized high temperature + ozone dual disinfection
- Customizable ozone concentration regulation
- Customizable disinfection cabinet and ozone separation design or integrated design
- Customizable cabinet separates and all kinds of large combined cabinets
- The custom fuselage is made of stainless steel

Technical Specifications

Model	Ozone Output	Power	Ozone Concentration	Dimension (cm)	NW/GW (kg)	UV Lamp	Layer	Opening Time	Voltage	Cooling Way	Gas Feeding
QLC-40L	3g/h	60W	15-25mg/L	40*30*60	14/15	1pc	2	30min	220V/ 50Hz	Air Cooling	Air Source
QLC-60L	3g/h	60W	15-25mg/L	40*30*75	18/19	1pc	2				
QLC-80L	5g/h	80W	15-25mg/L	45*30*90	21/22.5	2pc	2				
QLC-100L	5g/h	80W	15-25mg/L	45*35*100	23/24.5	2pc	3				
QLC-500L	7g/h	120W	15-25mg/L	85*50*160	100/115	4pc	4				

Applications


Product Packaging


Food Packaging Bag


Food Samples


Disinfection Of Food Containers


Operation Room Tools


Cosmetic Bottle


Workshop Dust-Free Clothing


Record Room Documents


Precision Instrument Components


Laboratory Uensils

PSA OXYGEN CONCENTRATOR

QLY-3/5/8/10/20/30/40L
PSA OXYGEN CONCENTRATOR

Features

- Used imported oxygen molecular sieve
- Domestic patent product
- Oxygen output stable and continuously
- High output pressure
- Working Voltage 110V / 220V is available
- High concentration up to 95%
- Silence working , low noise

Aeration Product Matching

QL100	QL113-0	QL310-1	QL300-48	QL100-25
Usable area:50m²	Usable area:90m²	Usable area:186m²	Usable area:180m²	Usable area:60m²

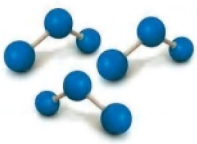
Technical Specifications

Equipment	Model	Dimension (cm)	Net Weight	Power	Gas Source	Oxygen Flow Rate
Oxygen Generator (Inner built-in air filter+condenser+ oil free compressor)	QLY-3L	40*30*57	22kg	300W	Built-in Gas Source	1-3L/min
	QLY-5L	40*30*62	24kg	450W		3-5L/min
	QLY-8L	42*30*62	27kg	700W		5-8L/min
	QLY-10L	52*37*105	28.5kg	750W		10-12L/min
	QLY-20L	52*37*110	60kg	1400W		20-25L/min
	QLY-30L	81.5*50*125	110kg	2000W		30-38L/min
	QLY-40L	/	145kg	2700W		40-50L/min

Applications

Fish Farming

Agriculture



Ozone Production

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OZONE ACCESSORIES

- 3G air-cooled ozone tube + 40W un-adiustable power suppl

- 5G air-cooled ozone tube + 60W un-adiustable power suppl

- 5G double cooling ozone tube + 60W un-adiustable power suply

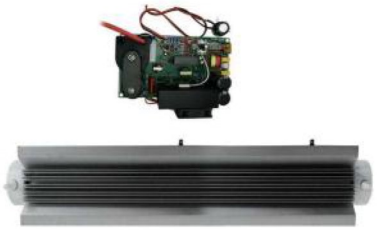
- 10G double cooling ozone tube + 80W adiustable power supply

- 10G double cooling ozone tube + 80W un-adijustable power supply

- 15G double cooling ozone tube + 200W adjustable power supply

■ 20G double cooling ozone tube + 200W un-adiustable power supply

■ 30G ozone tube (ai cooling water cooling available)+450W adiustable power supply



■ 50G air cooling ozone tube + 450W adiustable power supply

■ 50G water cooling honevcomb tube + 450W adiustable power supply

■ 100G water-cooled honeycomb tube+1000W adiustable power supply +high voltage package

■ Oxygen concentrator (3L/5L/8L/10L)

Reference concentration of ozone used in the air:

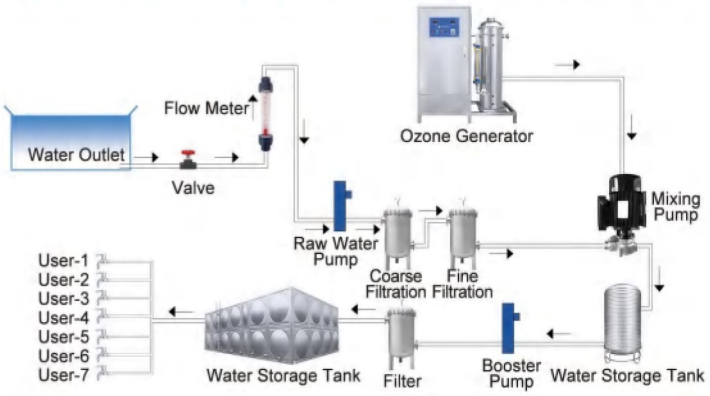
Application	Category	Concentration ppm	Ozone Per m³/H	Method Of Use
Disinfection	Medical Instruments	20	50-100	20ppm disinfection time 60min (International YY0214.295)
	Cold Room	6-10	15-25	Continuous start according to storage capacity and level of contamination, mainly to kill moulds
	Food Workshop	1-1.5	2.5-3.5	O_3 gas delivery after daily work off
	Wards,Operating Theatres	2.5-5	5.5-15	Turn on the machine when disinfection is required and check the total number of bacteria according to the standard
	Workwear Disinfection	10-20	25-50	Relative temperature around 90%, clothes hung on hangers
Anti Poisoning Preservation Freshness	General Premises	1-2	2.5-5	Regular start-ups
	Eggs	2-2.5	5-5.5	Intermittent supply of O_3 gas, 2-3 times a day
	Banana	2.5-3.5	5.5-8	
	Apple	2	5	
	Vegetables With Little Chlorophyll	1.5-1	3.5-2.5	
	Fish,Cheese	0.5-1	1.5-2.5	
Deodoriza-Tion Stink Purification	Morgue	3	7	Deodorise when there is an odour
	Fish Processing Plants	3	7	The polluted gas enters the treatment pipeline, and O_3 gas is put into the pipeline to oxidise and deodorise. If the odour in the workshop is serious, O_3 gas should be put in the inlet of the workshop so that O3 gas cannot be smelled.
	Slaughterhouse	2-3	5-7	
	Fatty acid Plants	10	25	
	Rubber Factory	3-10	7-25	
	Rubbish Waste Disposal	10	25	
	Sewage Treatment Plant	1-2	2.5-5	

Calculation method for ozone dosage in water treatment:

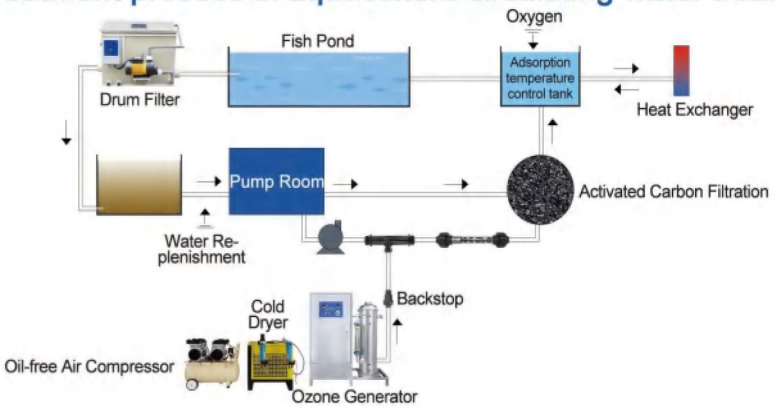
Application Industry	Ozone Dosage g/m³	Purpose
Drinking Water	3	Ozone is used for drinking water. In addition to sterilization, it also has decolorization, deodorization and removal of iron and manganese, removal of chloride, control of algae, improvement of taste, water quality, and no secondary pollution. Food and beverage factories can also use ozone to make ozone for other disinfection
Pure Water	3	
Mineral Water	5	
Tap Water And Secondary Pressurized Water Supply	5	
Beverage	3-10	
Swimming Pool	1-2	Disinfect and sterilize, decompose humus in water, improve water quality, make water more blue, stabilize pH value, decompose organic compounds in water, eliminate chloride side effects, effectively prevent and eliminate eye discomfort caused by chlorine treatment, stimulate skin and irritating odor, and reduce the use of chemical reagents
Hospital Sewage	10-20	High efficiency, rapid disinfection and sterilization, kill all kinds of microorganisms, remove the color, smell and chlorine and other pollutants in the sewage, increase the dissolved oxygen in the water, improve the water quality, decompose the refractory organic matter and three pathogenic substances, improve the biochemical property of the sewage, easy to decompose, and will not cause secondary pollution.
Water Reuse	5-10	Sterilization, disinfection, purification, decolorization, deodorization, no secondary pollution
Industrial Waste Water	(Depends on the industry)	It rapidly decomposes organic fuels such as fluorine and phenol in wastewater, decolorizes and deodorizes, removes harmful substances, and reduces COD.
Industrial Cooling Water	05.-1	Sterilize, Kill algae, Remove scale

Note: Calculation of ozone demand: the amount of ozone required for water treatment g/h = 1.06 coefficient × ozone dosing amount g/m3 × water volume m³/h

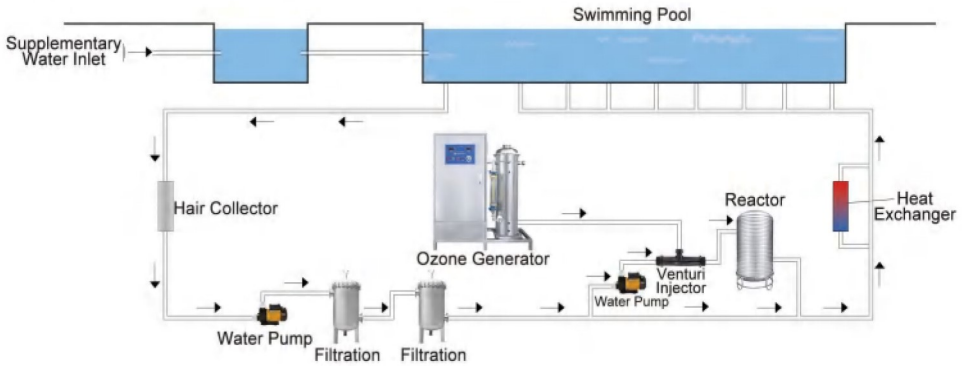
Process flow of ozone in direct drinking water system treatment



Ozone treatment process in aquaculture circulating water treatment



Swimming pool process flow



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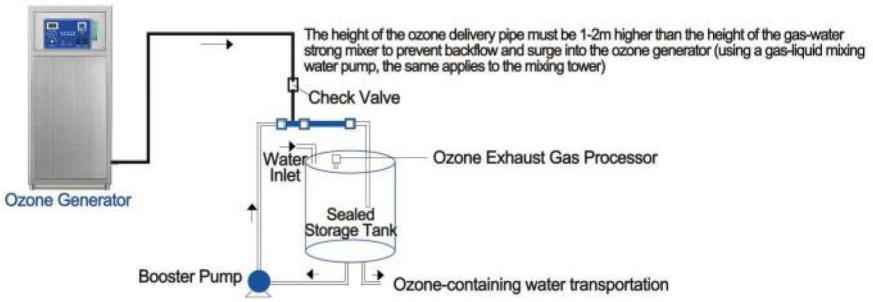
OZONE APPLICATION IN SEWAGE TREATMENT

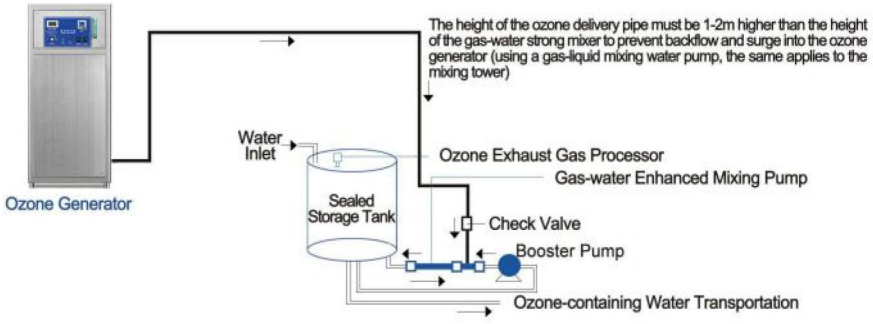
At present, ozone disinfection is widely used for purified water and natural water (mountain spring water, mineral water, groundwater, etc.) worldwide. When applying ozone purification to tap water, the international standard holds a solubility value of 0.4mg/L for 4 minutes, which is a CT value of 1.6. The following table provides reference values:

	Differentiated water supply	Pure water	Natural water	Tap water	Swimming pool water
Ozone concentration in water	0.1-0.3mg/L	0.2-0.4mg/L	0.4-0.6mg/L	0.4mg/L	0.2mg/L
Ozone dosage	1-2g/T	2-3g/T	3-5g/T	2-3g/T	1-2g/T

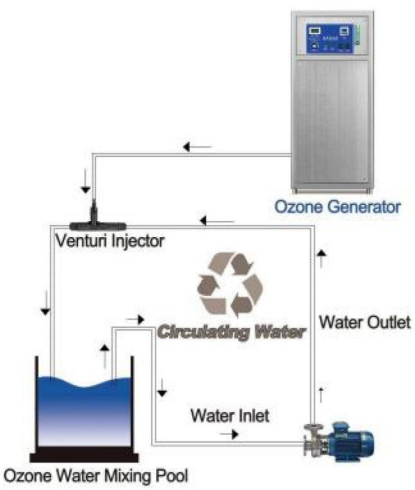
▪Gas-water mixed connection diagram①



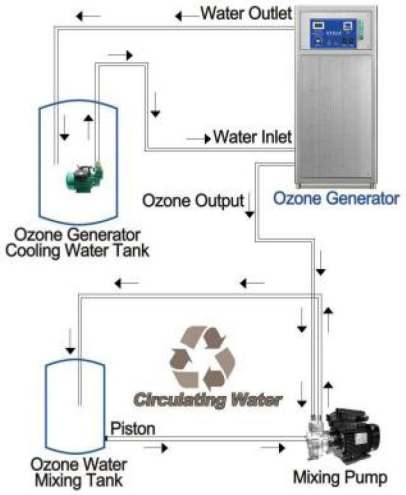
▪Gas-water mixed connection diagram②



▪ **Gas-liquid mixed water cycle link diagram A/B**

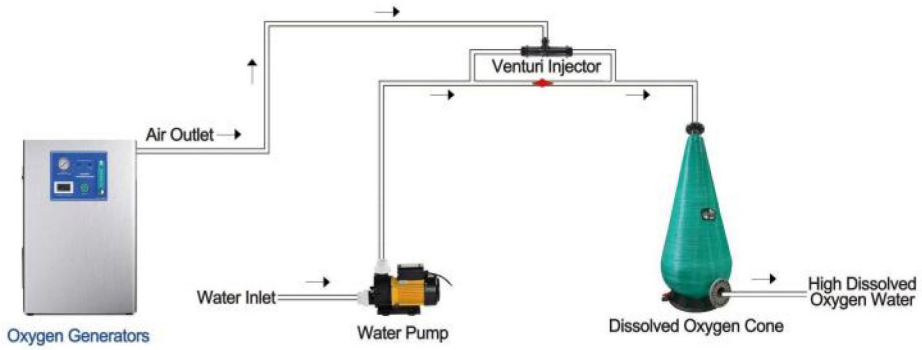


A:Injector Mixing



B:Mixing Pump

▪ **Oxygen gas-liquid mixture diagram**

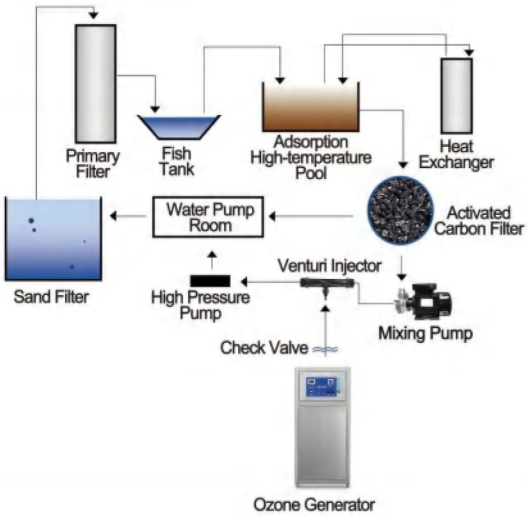


OZONE APPLICATION IN AQUACULTURE WATER TREATMENT

Ozone Treatment for Aquaculture Water

- Decolorization, deodorization, deodorization
- Disinfection (Efficient control of microorganisms)
- Kill bacteria, viruses, protozoa, etc
- Significantly reduce the generation of by-products such as chloramine, trihalomethane, and no trihalo-
- Remove the generated micro pollutants, internal secretions, etc
- Reduce free chlorine content in water
- Enhanced clarification effect, high water transparency, and excellent water quality.Disrupting the stability of colloidal substances, reducing the use of flocculants and additives, and reducing
- Algae removal that effectively kills or inhibits the growth and reproduction of algae

Flowchart



OZONE APPLICATION IN FOOD INDUSTRY

Microbial pollution in food production workshops is a crucial factor affecting product quality. Ozone can not only effectively kill them, but also effectively remove workshop odors and pollutants. The use of ozone disinfection can ensure that the surface bacterial indicators of objects such as air, ground, operating platforms, and utensils in the production workshop meet the standards, and the odor in the meat and poultry slaughtering workshop is significantly reduced.

Most of the bacteria in the production workshop can be brought into the workshop through the work clothes of the processing personnel, and in severe cases, it can cause widespread spread, which should be given sufficient attention. Ozone gas can penetrate various parts of clothing, so using ozone to disinfect work clothes is an efficient and simple method.

Ozone has a higher killing rate and faster speed against bacteria, viruses, microorganisms, and other pollutants in water, completely removing organic compounds and other pollutants without generating secondary pollution. Ozone has a higher killing rate against bacteria than chlorine agents, with a killing rate approximately 300 to 600 times that of chlorine agents. It can efficiently, economically, and conveniently kill bacteria.

Dissolve high concentrations of ozone in water. The ozone water produced has a strong degradation effect on various pesticides, organic toxins, and heavy metal ions. High concentration ozone water undergoes sterilization, disinfection, and degradation of other harmful substances. Ozone is converted back into oxygen without leaving any residue in the water, without secondary pollution or any side effects.

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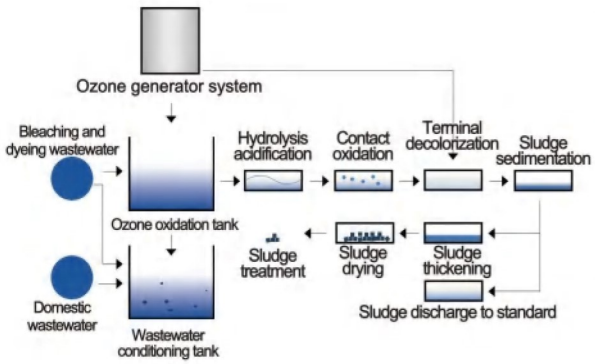
OZONE APPLICATION IN SEWAGE TREATMENT

- Oxidizing organic matter:improving biodegradability (converting COD into BOD),macromolecular cleavage,Chain with strong selective oxidation for C=C double bonds
- Oxidized inorganic compound: iron, manganese, sulfide, nitrite, cyanide, etc
- Discoloration, deodorization, and deodorization
- Disinfection: killing bacteria, inactivating viruses, protozoa, etc
- No generation of by-products such as trihalogenated compounds
- Remove micro fouling organisms, internal secretions, etc. generated by pharmaceutical and nursing products
- Enhance the removal effect of organic matter: After partial oxidation by ozone, organic matter can be enhanced
  The removal effect, such as detergents, phenols, insecticides, integrators, and other environmentally harmful chemicals
- Enhance the clarification effect, improve the transparency of water quality, and disrupt the stability of colloidal substances. Reduce the use of flocculants and additives and reduce the scale of separation equipment
- Advanced oxidation, capable of producing light radical radicals
- Reduce the production of sludge in sewage treatment, reduce the production of excess sludge, reduce the production of activated sludge, and improve the quality of activated sludge
- Increase methane production in digestion processes and promote sedimentation

Flowchart



OZONE APPLICATION IN SWIMMING WATER TREATMENT

- Discoloration, deodorization, and deodorization (reducing irritation to skin and eyes)
- Disinfection (efficient control of microorganisms)
- Kill bacteria, viruses, protozoa, etc
- Significantly reduce the generation and removal of micro pollutants, internal secretions, and other by-products such as chloramine, trihalomethane, and no trihalogenated compounds
- No harmful substances to swimmers and staff
- Reduce the free chlorine content in water
- Fresh indoor air
- Enhanced clarification effect, high water transparency, and excellent water quality
- Destroy the stability of colloidal substances, reduce the use of flocculants and additives, and reduce the scale of separation equipment

Flowchart