COOCHING
酷秦环保

High
Concentration
Micro-nano
Ozone Water Machine

高浓度微纳米臭氧水机

上海酷秦环保科技有限公司
Shanghai Cooching Environmental Protection Technology Co., Ltd

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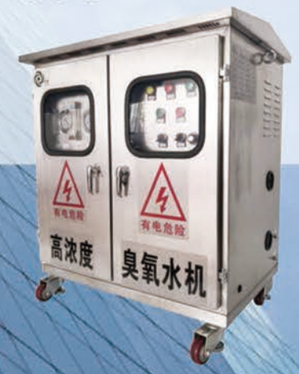
企业介绍
About us

上海酷秦环保科技有限公司是一家以生产成套环保设备为主的高科技公司，位于上海市奉贤区，研发和技术力量雄厚，产品质量稳定，性能可靠。
Shanghai Cooching Environmental Protection Technology Co., LTD, Located in fengxian district, Shanghai,is a high-tech company which mainly produces complete sets of environmental protection equipment, with strong R&D and technical strength, stable quality and reliable performance.

主要生产微纳米气泡发生器，污水处理曝气机，高浓度臭氧水机等一系列环保设备一体机。
Main products are micro-nano bubble generator, sewage treatment aerator, high - concentration ozone water machine and series integrated machine.

臭氧由于他的强氧化能力和强杀菌能力，在生产上特别是在水处理方面的应用日益增长。臭氧微纳米水现在已经广泛应用于污水处理、废弃处理，水产养殖，食品、医药、工业氧化等多个行业。
Application of ozone is becoming popular due to its strong oxidation capacity and strong bactericidal capacity, especially in water treatment field, The Ozone micro-nano water is widely used in sewage treatment, waste treatment, aquaculture, Food, medicine, industrial oxidation and other industries.



臭氧介绍
Ozone introduction

臭氧具有极强的氧化性，被世界公认为是一种广谱高效杀菌剂，它的氧化能力高于氯，在水中灭菌比氯快600-3000倍，甚至几秒种内可以杀死细菌，对于常见的大肠杆菌、粪链球菌、绿脓杆菌、金黄葡萄球菌、霉菌等，在臭氧浓度保持0.3PPM的环境中5分钟，其杀灭率可达到99%以上。

Ozone has a extremely oxidability, which is recognized as a broad-spectrum high efficiency fungicide, the oxidation capacity is higher than chlorine in water.The ability of sterilization in water is 600-3000 times than chlorine, even in seconds can kill bacteria.For the common escherichia coli, fecal streptococcus, green Sepsis, staphylococcus aureus, mold, etc.,the killing rate can reach more than 99% at the ozone concentration of 0.3PPM 5 minutes.

它的灭菌、消毒作用几乎是瞬时发生的，在水中臭氧浓度达到0.3-2mg/L时，0.5-1min内就可以致死细菌。达到相同灭菌效果（如使大肠杆菌杀灭率达99%）所需臭氧水药剂量仅是氯的0.0048%。

The sterilization and degermation are almost instaneous happened, when the concentration of ozone in water reaches 0.3-2mg/L, It can kill bacteria in 0.5 or 1 minute. The content of ozone water is only 0.0048% of chlorine to achieve the same effect (e.g. killing coli rate is up to 99%).

其它杀菌剂对比
Compared with other fungicides

名称 Item	分子式 Molecular Formula	标准电极点位 Standard Electrode Potential
氟 Fluorine	F_2	2.87
臭氧 Ozone	O_3	2.07
过氧化氢 Hydrogen peroxide	H_2O_2	1.78
高锰酸钾离子 Potassium Permanganate	$KMnO_4$	1.67
二氧化氯 Chlorine dioxide	ClO_2	1.50
氯 Chlorine	Cl_2	1.36

高浓度臭氧水机
high concentration ozone water machine

微纳米气泡水
Micro nano bubble water

臭氧的四大功效
The four functions of ozone

脱色 Discoloration

给水
Feed water

排水
drainage

印染废水
Printing and dyeing wastewater

氧化 Oxidation

纸浆漂白
Pulp bleaching

去除氧化氮、COD
Nitrogen oxide removal, COD

自来水去铁
Tap water iron removal

香料生产
The spice production

臭氧由3个氧原子组成
Composed of three oxygen atoms

仅次于氟的强氧化性
Second oxidizability only to fluorine

O_3

比氧还强的杀菌力
Stronger bactericidal power than oxygen

无二次公害
No secondary pollution

杀菌 The sterilization

给水排水
Water supply and drainage

游泳池
Swimming pool

水族馆
Aquarium

半导体生产
Semiconductor production

除臭 Deodorization

污水处理厂
Sewage treatment plant

畜牧养殖厂
Animal husbandry plant

牲畜屠宰场
Livestock slaughterhouse

厕所
Toilet

臭氧的计量单位及换算关系
Conversion Table

产量单位:	g/h kg/h 1kg/h=1000g/h 产量≈浓度X流量
Unit of product capacity:	g/h kg/h 1kg/h=1000g/h yield ≈ concentration X flow rate
气体浓度单位:	mg/L g/m³ mg/m³ ppm x% 1ppm=2.14mg/m³（空气中） 1%=13.5mg/L（空气中） 1%=14.8mg/L（氧气中）
Unit of gas concentration:	mg/L, g/m³, mg/m³ PPM x % 1 PPM = 2.14 mg/m³ (in air) 1% =13.5mg/L (in air) 1%=14.8mg/L (in oxygen)
水溶浓度单位:	mg/L g/m³ ppm 1ppm= 1mg/L
Unit of water solution concentration:	mg/L g/m³ PPM 1PPM = 1mg/L

高浓度臭氧水机
High concentration ozone water machine

本机应用先进的物理制氧原理，通过制氧塔的变压吸附作用，在常温常压下直接将空气中的氧和氮分离，取得高纯度的氧气；然后采用电晕放电法获取臭氧，在常压下使含氧气体在交变高压电场作用下产生电晕放电生成臭氧；通过气液混合系统进行水和臭氧的混合后，得到一定浓度的臭氧水。

Using the advanced principle of physical oxygen production,PSA (pressure swing adsorption) through the oxygen production tower,the machine obtains the high purity oxygen separating oxygen directly from the air at the ambient temperature and pressure.Under the action of alternating high voltage electric field,the method of corona discharge was used to obtain ozone, the ozone was generated with oxygen-containing gas by corona discharge at ambient pressure.After mixing water and ozone by gas-liquid mixing system, a certain concentration of ozone water is obtained.

细节展示
DETAIL DISPLAY

臭氧水机的构成
Composition of ozone water machine

臭氧发生器 + 气液混合系统 + 自动控制系统 + 外形结构
Ozone generator + Gas-liquid mixing system + Automatic control system + Shape structure

高浓度臭氧水机的型号参数
Model & Parameters

产品型号 Model	EDQ-CY10	EDQ-CY20	EDQ-CY30	EDQ-CY50	EDQ-CY100	EDQ-CY150	EDQ-CY300
臭氧产量 Product capacity（g/h）	5-10	10-30	30-50	50-100	100-200	200-400	500-800
臭氧浓度 Concentration（mg/L）	100-160	100-160	100-160	100-160	100-160	100-160	100-160
臭氧耗电 Power consumption (W)	200	500	700	1100	1500	2000	4000
溶气泵功率 Pump power (W)	550	1100	1500	2200	5500	11000	18500
臭氧水量 Ozone amount（m^3/h）	1-1.5	2-3	3.5-5	6-8	12-16	25-30	55-70
输入电源 Input power	AC220V/380V/50H	AC220V/380V/50H	AC220V/380V/50H	380V/50H	380V/50H	380V/50H	380V/50H
进气 Inlet flow (L/min)	1-2.5	3-5	5-8	10-12	20-25	40-50	90-110
进气压力 Inlet Pressure (MPa)	0.1-0.2	0.1-0.2	0.1-0.2	0.1-0.2	0.1-0.2	0.1-0.2	0.1-0.2
进气温度 Temperature of air inlet（℃）	≤20	≤20	≤20	≤20	≤20	≤20	≤20
冷却水进口 Cooling water inlet	10mm	10mm	10mm	10mm	15mm	20mm	25mm
冷却水出口 Outlet of cooling water	10mm	10mm	10mm	10mm	15mm	20mm	25mm
冷却水温度 cooling water temperature（℃）	≤30	≤30	≤30	≤30	≤30	≤30	≤30
冷却水量 Cooling water volume（L/h）	500	900	1400	1600	2000	3000	5000
工作条件 Machine working condition	环境温度≤45℃，RH≤80%，严禁在易燃易爆场所使用 Ambient temperature ≤45℃, RH≤80%, it is strictly prohibited to use in flammable and explosive places		环境温度≤45℃，RH≤80%，严禁在易燃易爆场所使用 Ambient temperature ≤45℃, RH≤80%, it is strictly prohibited to use in flammable and explosive places				
使用气源 Operation air source	设备自带制氧机，氧气纯度93%以上 Equipment with oxygen generator, the purity of oxygen is more than 93%		设备自带制氧机，氧气纯度93%以上 Equipment with oxygen generator, the purity of oxygen is more than 93%				
外形尺寸（mm）Size	900x550x850	900x550x950	900x600x1000	900x6000x1000	1000x700x1200	1400x800x1500	1500x900x1600

外形尺寸根据材质不同、要求不同会有一定的变化，解释权归制造商所有。
The external dimensions will vary according to different materials and requirement. The right of inertpretation belongs to the manufacturer.

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高混合效率（一）
High mixing efficiency (1)

混合效率能够达到95%
mixing efficiency can reach 95%

- 体积小。和同混合效率的爆气塔相比，体积只有百分之一。
- Small size.The volume is only one hundredth of aeration tower in the same efficiency.

- 功耗低。和水射器混合相比，功耗相当，但混合效率是水射器三到五倍。
- Low power consumption.Same power consumption is comparable to the water injector hybrid, the mixing efficiency is three to five times.

- 高入气率。传统混合泵气水比只有 1:9, 臭氧专用混合泵可实现 1:3 气水混合。
- High dissolved air rate.The ozone mixing pump can achieve 1:3,the gas-water ratio of traditional mixing pump is only 1:9.

- 专用于臭氧。主体采用不锈钢，密封材料采用特种材料，耐臭氧腐蚀。
- Exclusively used in ozone. Made of stainless steel in main body, special material in sealing material, resistanting to ozone corrosion.

- 管路采用卫生级不锈钢管件，耐压力、耐腐蚀。
- The pipeline is made of stainless steel in sanitary grade, resisting to pressure and corrosion.

- 可选择臭氧水气分离系统和臭氧尾气排放系统。
- Zone water gas separation system or ozone exhaust system is optional.

高混合效率（二）
High mixing efficiency (2)

出口最高可达110mg/L
The maximum concentration is 110mg/L

- 耐腐蚀：采用耐臭氧材料，在臭氧中可长时间运行
- Resistance corrosion: resistant-ozone material, Long running life in ozone.

- 温升低：保证了臭氧的浓度
- Low temperature rise: ensures the ozone concentration.

- 臭氧产量稳定：保证了系统的稳定运行
- Stable production capacity of ozone: ensure the system in stable operation.

- 高介电陶瓷管，采用氧气源。产量高，体积小，不容易破碎，寿命长。是酷秦臭氧机目前广泛使用的臭氧发生器类型。
- Advanced dielectric ceramic tube,oxygen source,High output: Small size, not easily broken, long life.The type is now widely used.

尾余臭氧的处理
Treatment for residual ozone

采用内置臭氧毁灭器或回收利用
Internal ozone destroyer or Recycling

臭氧毁灭器是臭氧毁灭的最佳产品。专门用于臭氧尾气处理。满足国家标准空气中臭氧尾气含量不得高于0.16mg/m3 的要求。该产品寿命长，耐臭氧，毁灭效率高。该产品不需要电能，没有电耗。因而大大节能。毁灭彻底，臭氧毁灭率可达 95% 以上，最高可达到 99.9%. 产品优于美国产臭氧毁灭器。

Ozone destroyer is the best products of ozone destruction.Specially used for treatment of ozone residual gas .It meets the national standard that the ozone exhaust content in the air should not be higher than 0.16mg/m3.The product has long life, ozone resistance and high destruction efficiency.The product does not need electrical energy, no power consumption.So it saves a lot of energy. ozone destruction rate can reach more than 95%, up to 99.9%.The product is superior to the ozone destructor that produced in the United States.

用于臭氧水处理时对臭氧尾气的毁灭，避免传统处理臭氧尾气时，采用臭氧尾气引到室外的麻烦和风险。

It is used to destroy ozone residual gas, avoiding the trouble and risk for using which escaping to the outside in the traditional treatment for ozone residual gas.

回收利用是比较经济的方法，但是采用该方式

要注意混合泵进口水压和气压的调节。

Recycling is a economical way, but in this way, regulating the mixing pump with inlet water pressure and air pressure should be noted.

高浓度臭氧水机的应用
Application of high concentration ozone water machine

各食品饮料企业，医药企业等包装瓶和加工设备的清洗消毒；
Cleaning and disinfection of package bottles and processing equipment for food and beverage enterprises ,pharmaceutical enterprises.

矿泉水、纯净水、医用水、自来水、葡萄酒瓶冲洗，等杀菌消毒；各生产企业自备水的消毒；学校、部队、机关、工厂等公共食堂对蔬菜、水果、肉类、凤爪漂白、凤爪杀菌等杀菌消毒；
Sterilization such as Mineral water, purified water, medical water, tap water, wine bottle washing, Disinfection of water supplied by each production enterprise; Schools, troops, organs, factories and other public canteens sterilization for vegetables, fruits, meat, chicken feet etc.

水产养殖场对养殖用水杀菌消毒，防治水产类疾病；
sterilization for Aquaculture farm in aquaculture water , prevention and treatment to aquatic diseases;

污水处理和垃圾处理中强化杀菌消毒氧化杀菌脱色；
sewage treatment and garbage treatment, intensified sterilization, oxidation sterilization and decolorization;

泳池、库房、小区供水等用臭氧水杀菌消毒；
Sterilization with ozone water for pool,warehouse,community water supply.

对农产品如蔬菜、水果等杀菌消毒，减少农药残留；
Sterilize agricultural products such as reduce pesticide residues to vegetables and fruits

游泳池或家庭小型游泳池、温泉水池等水消毒净化；
Disinfection and purification of swimming pool or family small swimming pool, hot spring pool, etc.

包装物消毒，环境消毒，空气净化，化工合成，材料改性等；
Packaging disinfection, environmental disinfection, air purification, chemical synthesis, material modification, etc.

人卫生清洁，被物，衣服清洗消毒。
People's Clean health,cleaning and disinfection for clothes and quilt

果蔬清洗
Fruit and vegetable cleaning

黑臭河道
Black smelly river

食品饮料
Food and beverage

市政污水
Municipal wastewater

水产养殖
Aquaculture

废气处理
waste gas treatment

泳池消毒
Swimming pool disinfection

纸浆漂白
Pulp bleaching