朗逸环保
LUCKY EP

臭氧发生器系统供应商
Ozone generator system supplier

工业污水处理 Industrial waste water
市政污水处理 Municipal waste waterr
饮用水消毒 Drinking water disinfection
泳池用水消毒 Swimming pool water disinfection
烟气脱硝 Flue gas denitrification
化工合成 Chemical synthesis
纸浆漂白 Pulp bleaching
预涂膜处理 Pre coating
…… ……

朗逸环保
LUCKY EP

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QINGDAO LUCKY EP TECHNOLOGY CO.,LTD.

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中国•青岛朗逸环保技术有限公司
QINGDAO LUCKY ENVIRINMENTAL PROTECTION TECHNOLOGY CO.,LTD.

效果图

企业简介
Company Profile

青岛朗逸环保技术有限公司坐落于美丽的帆船之都——青岛，是一家专门从事臭氧发生器及其配套设备的研发、制造，臭氧应用机理研究、工程应用开发、设计、安装调试为一体的专业化高新型技术企业。它拥有先进的制造技术和丰富的生产经验，依托数家科研院校为技术后盾，不断汲取国内外先进技术，不断接受市场反馈改进产品，完善自我。

朗逸公司拥有专业化的技术团队，掌握国际领先的臭氧发生器制造技术，可提供单机产量3g/h—100kg/h的臭氧发生系统。朗逸系列臭氧发生器经精心设计、严格管理、精密的工艺控制，实现了安全简便的操控、紧凑精巧的结构、稳定可靠的运行，并攻克了国内生产大型臭氧发生器的种种难题。凭借多年的臭氧机理研究及臭氧实际应用经验，朗逸环保为客户提供强有力的技术支持，提供相应的专业化服务，已成为行业内一支不可或缺的中坚力量！

Qingdao LUCKY EP Co., Ltd. is located in the beautiful sailing capital—Qingdao city. It is a high tech company which mainly research technology of application and produce ozone generator. LUCKY EP has advanced manufacturing technology and rich experience in product processing, backed up by several scientific research institutes, we keep absorbing the experience from foreign advanced technology and keep learning from the market feedback to improve ourselves.

Qingdao LUCKY EP has professional technical team, masters international advanced manufacturing technology of ozone generator, can provide 3g/h - 100kg/h ozone system. And by careful design, strict management, and sophisticated process control, the LUCKY EP product series achieve excellent performance such as safe and easy control, compact and skillful structure, stable and reliable operation, ect, and we also overcome a lot of difficulties in production of large ozone generator. We ensure the progressiveness, the stability of our products. Now, it has become an indispensable backbone in the supplier of ozone generator for efforts and years of experience in practical application.

臭氧发生器简介
Ozone Generator Introduction

臭氧发生器是产生臭氧所必需的装置，主要包括臭氧发生装置和电源装置两大部分，涉及机械、电气电子、材料、自动化、化工、化学等多门科学。我公司臭氧发生器的产生臭氧的原理为气隙电晕放电，即是利用高速电子轰击干燥的含氧气体，将氧分子其分解成氧原子，紧接着通过三体碰撞反应形成臭氧分子。

The ozone generator mainly includes reaction tank and power supply unit. It involved knowledge of many fields, such as machinery, electricity & electrics, materials technology, automation, chemical ect. High-speed electron beams bombard and decompose Oxygen molecules into oxygen atoms, and these tiny particles each of the three, then become ozone molecules. That is the principle of ozone generator produced by LUCKY EP.

◆高精度的搪瓷放电体及进口高硼硅玻璃管
High-precision Ceramic discharge tube and imported pyrex glass tube

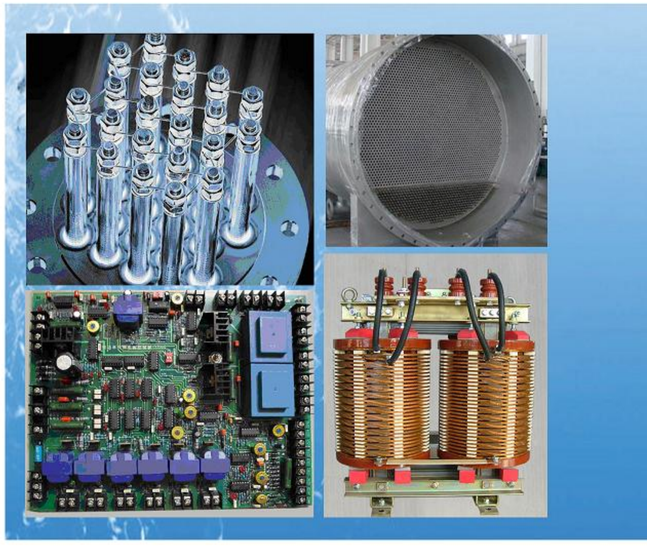
◆微间隙放电技术
Micro gap discharge technology

◆集成高效放电室
Integrated and efficient discharge chamber

◆专业臭氧电源
Professional power supply used in ozone generator

◆高浓度、低电耗
High concentration, low power consumption

◆自动化 人机化
Automation and humanization



臭氧的应用
The Application of Ozone

1. 工业污水处理 Industrial Wastewater Treatment

臭氧在工业废水处理中应用普遍，常见的应用有对含酚、氰、芳香烃等废水氧化处理，提高可生化性，降解COD，以及印染废水等脱色等。

Ozone is commonly used in industrial wastewater treatment, most frequently in treatment of wastewater containing phenols, cyanide, aromatic hydrocarbon to remove COD ,and to improve the biodegradability, and to decolorize dyeing wastewater.

2. 市政污水处理 Municipal Wastewater Treatment

臭氧作为优良的氧化剂，可以杀灭康氯性强的病毒和芽孢，可分解难降解的有机物，提高水的可生化性，也可脱色、除臭等，在中水回用中应用广泛。

As a good oxidizer, ozone is capable of killing viruses and fungus gemmae with strong resistance to chlorine, disintegrating hardly biodegradable organic matter, improving the biodegradable of waste water, and ozone is capable of decolorization and deodorization. That is commonly used in the reuse of intermediate water.

3. 饮用水处理 Drinking Water Treatment

臭氧应用于饮用水处理，除灭菌效果好、无二次污染外，还兼有脱色、除臭、氧化分解有机物和助凝作用。在自来水、二次供水、纯净水、矿泉水、饮料用水方面都有应用。

The application of ozone in drinking water treatment, not only the sterilizing effect is good, no two pollution, but also has the capable of decolorization, oxidation and coagulation of organic compounds. This has applications in tap water, secondary water supply, pure water, mineral water, beverage water.

4. 泳池水处理 Swimming Pool Water Treatment

泳池水采用臭氧杀菌、除藻效果显著，改善水质颜色，与加氯、硫酸铜等传统方式相比没有次生污染，不会有水质刺眼、刺激皮肤甚至导致过敏、大面积中毒的危害。

The water used in swimming pool which is treated by ozone sterilization has better algae removal effect than that is treated with traditional methods by chlorine or copper sulfate. The water does not result in secondary pollution and risks like dazzling water, skin irrigation, large-scale poisoning, ect.

5. 烟气脱硝 Flue Gas Denitrification

臭氧可将烟气中的氮氧化合物氧化成高价态，经洗涤塔转化为可溶物质。

Oxides of nitrogen in flue gas can be ozone oxidized into high valence compounds, dissolved in water in the washing tower.

6. 化工合成 Chemical Synthesis

臭氧是最洁净的氧化剂，在提供氧原子的同时，不会引入其他杂质，因此理所当然的成为医药中间体、化工中间体、香料理想的氧化剂原料。

Ozone is the cleanest oxidant, supplying of oxygen atoms with no other impurities, therefore ozone has certainly become the best raw material for the production of pharmaceutical intermediates, chemical intermediates and spices.

7. GMP认证及持续改进 GMP Certification and Continuous Improvement

制药和食品企业为持续达到GMP认证标准，对空间、HVAC系统、密闭容器、物体表面、管道等消毒，臭氧消毒是替代紫外光照射、化学熏蒸、蒸汽消毒的首选。

To keep meeting the GMP certification standards, pharmaceutical manufacturers and food manufacturers has to disinfect space, HVAC system, closed containers, pipelines, the object surface. Ozone disinfection is the best method instead of UV irradiation, chemical fumigation, disinfection.







8. 其他应用 Other applications

养殖水、冷却循环水、纸浆漂白、预涂膜处理、表面改性、橡胶老化试验、蔬果保鲜及解毒、金库消毒、臭气处理、室内除甲醛等

Aquaculture water treatment, cooling circulating water treatment, Pulp bleaching, pre coating, surface modification, rubber aging test, Vegetable & Fruit preservation and disinfection, Treasury disinfection, Odor treatment, dispelled of formaldehyde indoor, and so on.

大型臭氧发生器
Large Ozone Generator

大型空气源臭氧发生器参数
Air-Source Large Ozone Generator Parameter

产品型号	臭氧产量 kg/h	臭氧浓度 mg/l	用气量 Nm³/h	冷却水用量 T/h	外观尺寸mm 宽W	深D	高H	额定功率 kw
LY-A-1K	1		30~50	3~4	1800	800	1800	14~16
LY-A-2K	2		60~100	6~8	1800	1600	1800	28~32
LY-A-3K	3		90~150	9~12	2200	1800	2000	42~48
LY-A-4K	4		120~200	12~16	2600	2000	2100	56~64
LY-A-5K	5	20~35mg/l	150~250	15~20	3000	2400	2100	70~80
LY-A-8K	8		240~400	24~32	3400	2600	2100	112~128
LY-A-10K	10	常规浓度为20~30mg/l,	300~500	30~40	3400	2800	2200	140~160
LY-A-20K	20	接受更高浓度定制,	600~1000	60~80	4500	3400	2600	280~320
LY-A-50K	50	最高浓度45mg/l。	1500~2500	150~200	6000	4400	2800	700~800

大型氧气源臭氧发生器参数
Oxygen-Source Large Ozone Generator Parameter

产品型号	臭氧产量 kg/h	臭氧浓度 mg/l	用气量 Nm³/h	冷却水用量 T/h	外观尺寸mm 宽W	深D	高H	额定功率 kw
LY-O-1K	1		6.7~12.5	1.5~2	1200	800	1800	7~8
LY-O-2K	2		13.4~25	3~4	1800	800	1800	14~16
LY-O-3K	3		20~37.5	4.5~6	1800	1200	1800	21~24
LY-O-4K	4		26.7~50	6~8	1800	1600	1800	28~32
LY-O-5K	5	80~150mg/l	33.4~62.5	7.5~10	2000	1600	1900	35~40
LY-O-8K	8		53.4~75	12~16	2600	2000	2100	56~64
LY-O-10K	10		66.7~125	15~20	3000	2400	2100	70~80
LY-O-20K	20	常规浓度为80~120mg/l	134~250	30~40	3400	2800	2200	140~160
LY-O-50K	50	接受更高浓度定制,	334~625	75~100	4500	3400	2600	350~400
LY-O-100K	100	最高浓度180mg/l。	667~1250	150~200	6000	4400	2800	700~800

中型臭氧发生器
Medium Ozone Generator

中型空气源臭氧发生器参数
Air-Source Medium Ozone Generator Parameter

产品型号	臭氧产量 g/h	臭氧浓度 mg/l	用气量 Nm³/h	冷却水用量 T/h	外观尺寸mm 宽W	深D	高H	额定功率 kw
LY-A-100G	100		3~5	0.3~0.4	1000	800	1700	1.6
LY-A-200G	200		6~10	0.6~0.8	1200	800	1700	3.2
LY-A-300G	300		9~15	0.9~1.2	1200	800	1700	4.8
LY-A-400G	400		12~20	1.2~1.6	1400	800	1700	6.4
LY-A-500G	500	20~35mg/l	15~25	1.5~2	1400	800	1700	8
LY-A-600G	600		18~30	1.8~2.4	1400	800	1700	9.6
LY-A-700G	700	常规浓度为20~30mg/l,	21~35	2.1~2.7	1800	800	1800	11.2
LY-A-800G	800	接受更高浓度定制,	24~40	2.4~3.2	1800	800	1800	12.8
LY-A-900G	900	最高浓度45mg/l。	27~45	2.7~3.6	1800	800	1800	14.4

中型氧气源臭氧发生器参数
Oxygen-Source Medium Ozone Generator Parameter

产品型号	臭氧产量 g/h	臭氧浓度 mg/l	用气量 Nm³/h	冷却水用量 T/h	外观尺寸mm 宽W	深D	高H	额定功率 kw
LY-O-100G	100		0.7~1.3	0.15~0.2	800	600	1600	0.8
LY-O-200G	200		1.4~2.5	0.3~0.4	1000	800	1700	1.6
LY-O-300G	300		2~3.8	0.45~0.6	1000	800	1700	2.4
LY-O-400G	400		2.7~5	0.6~0.8	1200	800	1700	3.2
LY-O-500G	500	80~150mg/l	3.4~6.3	0.75~1	1200	800	1700	4
LY-O-600G	600		4~7.5	0.9~1.2	1200	800	1700	4.8
LY-O-700G	700	常规浓度为80~120mg/l,	4.7~8.8	1.05~1.4	1400	800	1700	5.6
LY-O-800G	800	接受更高浓度定制,	5.4~10	1.2~1.6	1400	800	1700	6.4
LY-O-900G	900	最高浓度180mg/l。	6~11.3	1.35~1.8	1400	800	1700	7.2

小型臭氧发生器
Small Ozone Generator

各类小型臭氧发生器参数
Kinds of Small Ozone Generator Parameter

产品型号	臭氧产量 g/h	气源类型	臭氧浓度 mg/l	用气量 Nm³/h	冷却水用量 T/h	外观尺寸mm 宽W	深D	高H	额定功率 kw
LY-A-10G	10			0.3~0.5	30~40	500	400	1300	0.16
LY-A-20G	20			0.6~1	60~80	600	600	1600	0.32
LY-A-30G	30			0.9~1.5	90~120	600	600	1600	0.48
LY-A-40G	40	空气	20~30	1.2~2	120~160	800	600	1600	0.64
LY-A-50G	50			1.5~2.5	150~200	800	600	1600	0.80
LY-A-60G	60			2~3	180~240	800	600	1600	0.96
LY-A-80G	80			2.6~4	240~320	1000	800	1700	1.28
LY-O-10G	10			0.09~0.13	15~20	300	250	500	0.08
LY-O-20G	20			0.17~0.25	30~40	500	300	1000	0.16
LY-O-30K	30			0.26~0.38	45~60	500	300	1000	0.24
LY-O-40G	40	氧气	80~120	0.34~0.50	60~80	500	300	1000	0.32
LY-O-50G	50			0.42~0.63	75~100	500	300	1000	0.40
LY-O-60G	60			0.5~0.75	90~120	800	300	1200	0.48
LY-O-80G	80			0.67~1	120~160	800	300	1200	0.56
LY-AI-10G	10					320	280	220	0.14
LY-AI-20G	20					330	280	300	0.28
LY-AO-30G	30	本系列为风冷一体机，产量从3g/h到150g/h均可，AI指内置式，AO为				400	330	610	0.48
LY-AO-40G	40	外置式，AM为移动式，G为挂式。型号不便一一列举。空气消毒机如				500	360	1020	0.64
LY-AM-20G	20	需水冷式，为A系列。				390	300	760	0.35
LY-AM-40G	40					440	320	780	0.65

臭氧的应用
The Application of Ozone

泳池专用臭氧发生器参数
Swimming-pool Ozone Generator Parameter

产品型号	臭氧产量 g/h	臭氧浓度 mg/l	气源类型	冷却水用量 T/h	外观尺寸mm 宽W	深D	高H	额定功率 kw
LY-S-10G	10			0.03~0.04	400	300	1000	0.3
LY-S-20G	20			0.06~0.08	500	400	1200	0.6
LY-S-30G	30			0.09~0.12	600	450	1400	0.9
LY-S-40G	40	20~30mg/l	空气	0.12~0.16	600	450	1400	1.2
LY-S-50G	50			0.15~0.20	800	600	1600	1.5
LY-S-60G	60			0.18~0.24	800	600	1600	1.8
LY-S-80G	80			0.24~0.32	800	600	1600	2.4
LY-S-100G	100			0.3~0.4	1200	600	1600	3
LY-S-120G	120			0.36~0.48	1200	600	1600	3.6
LY-S-150G	150			0.45~0.6	1400	600	1700	4.5
LY-S-180G	180	80~120mg/l	氧气	0.54~0.72	1400	600	1700	5.4
LY-S-200G	200			0.6~0.8	1400	600	1700	6
LY-S-250G	250			0.75~1	1400	800	1800	7.5
LY-S-300G	300			0.9~1.2	1400	800	1800	9
LY-S-400G	400			1.2~1.5	1600	800	1800	12
LY-S-500G	500		分体式	1.5~2.0	1600	800	1800	15
LY-S-600G	600			1.8~2.4	1600	800	1800	18

备注： 300g/h及以下型号为一体机，气源类型可根据客户需求定制，空气源浓度为20~30mg/l，氧气源浓度为80~120mg/l。
300g/h以上气源部分外置,也可根据用户定制。

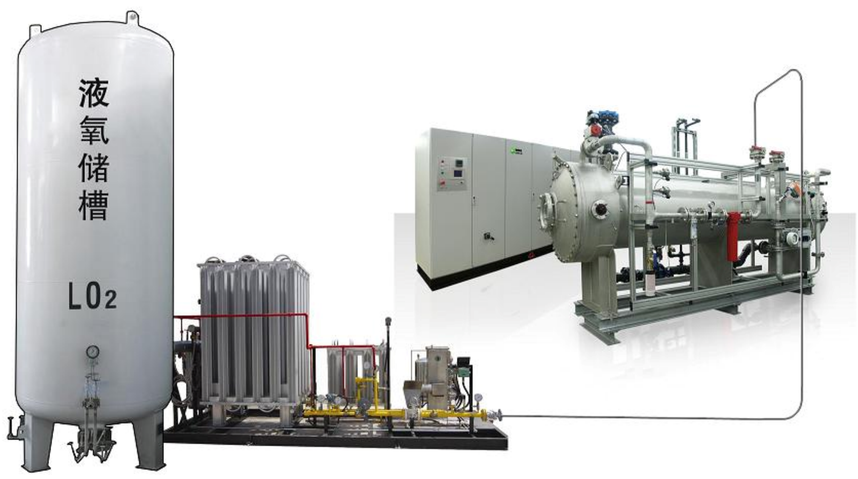
臭氧发生系统工艺流程
Ozone Generator System Process Flow

空气源/富氧源系统工艺流程
Air Source/Oxygen-enriched Source Ozone Generator System Process Flow

空压机 Air Compressor | 储气罐 Gas Tank | 过滤器 Filter | 冷干机 lyophilizer | 过滤器 Filter | 吸干机或制氧机 Adsorption Dryer or Oxygenerator | 过滤器 Filter | 臭氧发生器 Ozone Generator | 浓度监测仪 Ozone Monitor

氧气源臭氧发生系统工艺流程
Oxygen Source Ozone Generator System Process Flow

液氧储槽 Liquid Oxygen Tank | 汽化器 Carburetor | 减压装置 Decompressor | 过滤器 Filter | 臭氧发生器 Ozone Generator



选型参考及注意事项
Selection Reference & Attentions

臭氧发生器选型非常重要，应从以下几个方面进行选型：

1.确定臭氧发生器的型号即臭氧产量。

根据实验数据或者经验数据计算臭氧需求量，确定臭氧型号。可参考下表经验数据根据实际情况灵活变通。

用途 Purpose	臭氧投加量 Ozone dosage	备注 Remarks	用途 Purpose	臭氧投加量 Ozone dosage	备注 Remarks
印染废水脱色	10~20mg/l	配合曝气生物滤池使用	游泳池循环水	0.6~1.2mg/l	配合氯使用
废水提标改造	15~30mg/l	配合曝气生物滤池使用	矿泉水纯净水	3mg/l	间断使用
难降解废水预处理	40~200mg/l	不间断使用	牛仔布脱色	50~300mg/l	依照衣物多少
医院污水排放	10~30mg/l	定期使用	食品车间消毒	5~10ppm	每天作用1h
市政污水消毒	10~30mg/l	不间断使用	药品车间消毒	10~30ppm	每天作用1h
自来水前处理	0.5~1mg/l	配合活性炭使用	冷库消毒	1~2.5ppm	间断使用
自来水后处理	1~2mg/l	配合氯胺使用	办公居住楼宇消毒	0.1~1ppm	定期使用
二次供水	1~1.5mg/l	配合活性炭使用	金库消毒	5ppm	间断使用
矿泉水纯净水	2~25mg/l			1ppm=2.14mg/m³	

2.鉴别臭氧发生器的品质。

优质的臭氧发生器应是高介电材料、标准配置、高精度配合、中频驱动、智能控制、高臭氧浓度输出、低电耗和低气源消耗。**他们普遍采用管式放电技术，搪瓷放电体或进口玻璃管，中频电源，水冷式蜂窝式结构放电室。**无论是用于什么行业水冷管式电晕放电臭氧发生器都是最佳的选择。只有部分场合可能出于经济角度考虑使用陶瓷片。

3.性价比。

优质臭氧发生器性能稳定，臭氧浓度高，产量足，运行稳定，衰减小。而低配置臭氧发生器工作时受环境影响较大，产量严重不足，浓度低，衰减严重，影响处理效果。选购时应对其售价和性能进行综合评比，切勿只看价格！

4.防止误区。

A.了解臭氧发生器气源类型和与其对应的臭氧产量，切勿只看标定产量，空气源1kg使用氧气时可产臭氧2kg左右；

B.了解发生器的结构形式，是否可以连续运行，臭氧输出浓度等指标。空气消毒专用的是无法应用水水处理的；

C.臭氧不是万能的，工艺恰当，方法得当，才能得到理想的效果；

D.选购臭氧发生器时供求双方应全方位沟通，切勿以价格为主要参考依据衡量臭氧发生器。

5.备用机。

对于连续工作不许停机的场所，选购臭氧发生器时应有备用机。建议采用软备用方式购置，在设备维护或修理过程中交替使用，避免停机维护影响正常生产。例如需求产出10kg/h臭氧时，可选2套5kg/h或2套6kg/h臭氧机组。

臭氧发生器配套设备
Corollary Equipment of Ozone Generator

臭氧尾气破坏器 Ozone Destructor

未耗尽的臭氧尾气需破坏分解后方可排入大气。我公司臭氧尾气破坏器采用催化剂辅助电加热的方式，有能耗低、破坏效率高、体积小、寿命长的特点。

Ozone tail gas undepleted needs to be decomposed before discharged into the atmosphere. The ozone destructor using the principle of catalytic decomposition and electric heating decomposition has a lot of advantages such as low energy consumption, high efficiency, small volume, long life.

气源处理系统Air Treatment System

臭氧发生器要求气源洁净、干燥，确保原料气体常温露点≤-50℃，温度＜30℃，含油量＜0.01ppm，粉尘颗粒度小于0.1μm，压力0.2~0.5MPa。如果是富氧气源，要保证氧气浓度≥90%。

Gas source for ozone needs to keep dry and clean. We should ensure dew point at normal temperature ≤ -50 ℃, temperature < 30 ℃, oil content < 0.01ppm, particle size less than 0.1 μ m, pressure 0.2~0.5MPa. If the oxygen enriched air is used, ensure the oxygen concentration ≥ 90%.

循环冷却水系统Circulating Cooling Water System

公斤级设备在冷却水水质不好的情况下配备循环冷却水系统。使用蒸馏水，保证臭氧发生器冷却水腔无沉积、不挂膜、无腐蚀。

Large ozone equipment need equipped with circulation cooling water system in the cooling water bad quality condition. Using distilled water, can ensure the ozone generator cooling water cavity without deposition, phoenix film, corrosion.

臭氧专用曝气盘 Aeration Disc for Azone

臭氧曝气盘盘体采用不锈钢材质，盘面为钛合金，使臭氧化气体形成微小的气泡，均匀分布于水中，大大提高水气接触面积，促进臭氧的吸收。

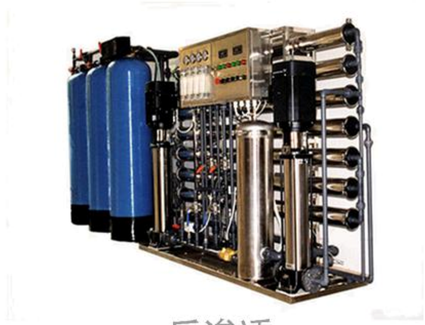
Ozone aeration plate body is made of stainless steel material, and face of the disk is made of titanium alloy. It can make ozone gas become tiny bubbles, and evenly distributed in the water.

臭氧监测仪表 Ozone Monitoring Instrument

常见的监测仪表有气体臭氧浓度监测仪、水中臭氧浓度监测仪、臭氧泄漏报警仪等，可实时在线监测参数，确保运行安全。

There are ozone concentration monitor used in gas, ozone concentration monitor used in water, ozone leakage alarm and so on. It can improve security with the real-time online monitoring.

其他设备
Other Equipment



反渗透

超滤

污水一体化处理设备

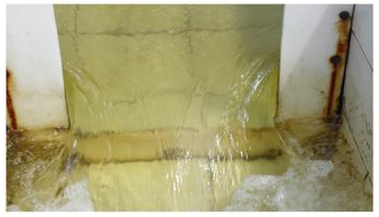
加药装置

臭氧反应罐

高浓度臭氧水机

二氧化氯发生器

承接工程
Undertake Projects



1、 工业废水提标改造 Industrial wastewater of upgrading and reconstruction

我公司擅长使用臭氧氧化+BAF工艺。臭氧氧化处理，提高水质的可生化性，然后使用生物曝气滤池降解COD。可将COD降解到60mg/l以下，甚至更低。

Our company specializes in the use of ozone oxidation +BAF process. Ozone oxidation treatment is used to improve the water quality of the biodegradability, and then use the biological aerated filter to split COD. COD can be split to 60mg/l or even lower.

2、 高难废水处理 biodegradable wastewater treatment

针对高难废水，我公司采用非常规絮凝+臭氧+生化方式，处理效果好，运行费用低。

Biodegradable wastewater treated by unconventional flocculation ,ozone and biochemical methods, achieve the purpose of good effect and low running cost.

3、 水质监测系统安装调试 Installation and commissioning of water quality monitoring system

承接COD、N-NH3、PH、总磷、总氮、重金属等系列在线监测系统工程。

Undertake the project of water quality online monitoring system such as N-NH3, COD PH, total phosphorus, total nitrogen, heavy metals.

4、 纯水系统工程 Water purification systems engineering

承接纯化水、去离子水、循环冷却水、酒店用水、直饮水等净水系统工程

We undertake t water purification systems engineering such as purified water, deionized water, cooling water, drinking water, he hotel direct drinking water etc.

5、 泳池水处理项目改造 swimming pool water treatment transformation

提供对项目游泳池的设备优化配置方案，并对所涉及到的设备、管网系统、及安装辅件进行供货、安装、调试、培训、维修等。

Provide equipment configuration optimization scheme of the project of the swimming pool. Supply, installation, commissioning and training, repair right equipment, pipe and accessories.

设备及工程业绩
Equipment & Project Performance