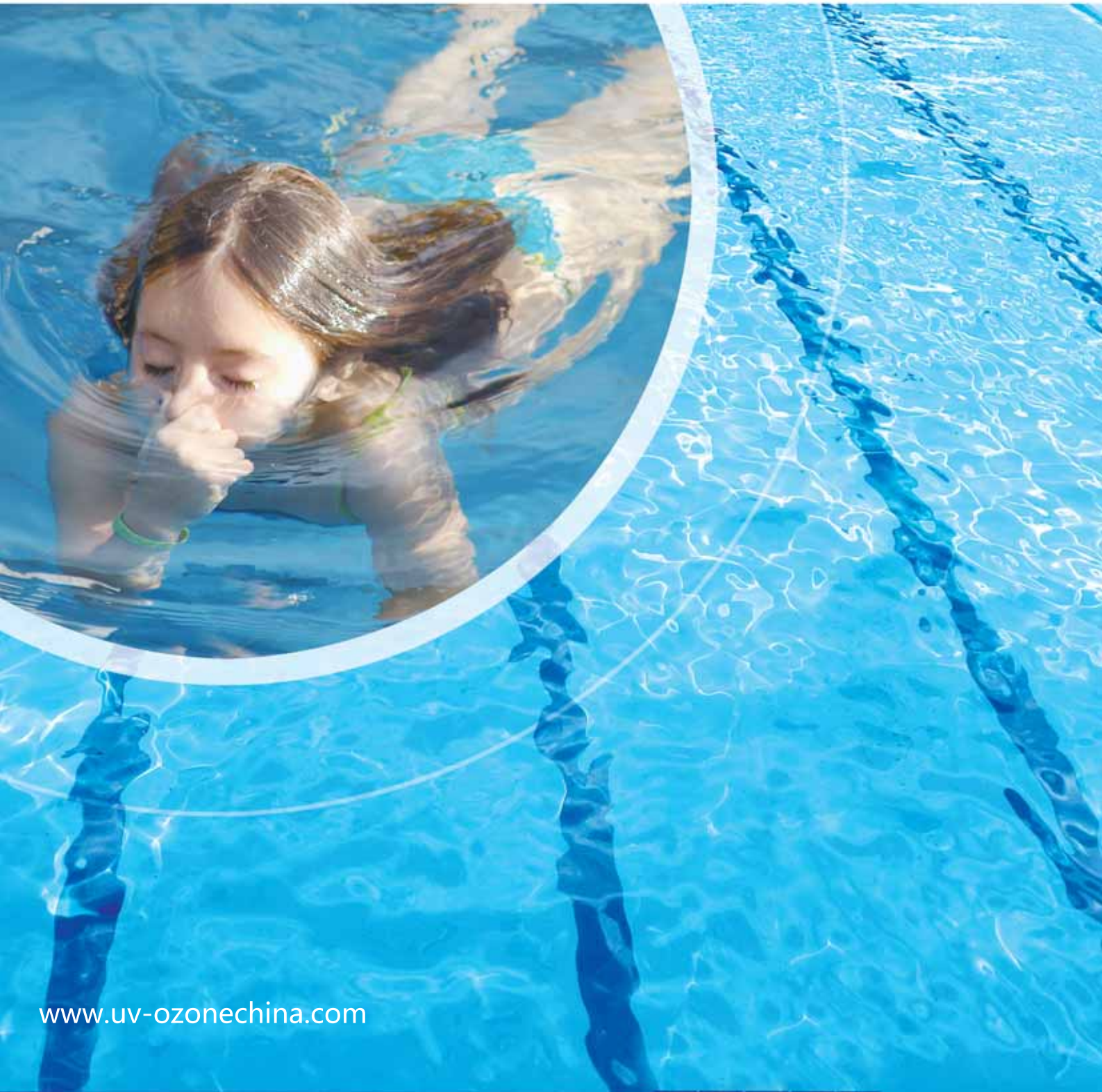
臭氧发生器

Ozone Generator Catalog



www.uv-ozonechina.com







公司简介
Company profile

优曼康成立于2010年，以生产、研发，销售为一体的专业臭氧和紫外线消毒设备制造商，产品涵盖饮用水，市政水，污水等水处理要求。经过多年努力成功研发出低能耗、高浓度、长寿命的陶瓷臭氧放电管。

优曼康以解决客户的需求为己任，不段提高自身实力，优化产品性能，努力做出最好的臭氧设备。同时，优曼康重视培养团队的专业水平，定期对工程师和销售团队进行专业知识的培训，以提高整个团队的专业度。

UMEK focus on ozone generator and ultraviolet disinfection manufacturering, successfully developed a low energy consumption, high concentration, long life ceramic ozone discharge tube, it has been used in sewage treatment, medical and other industries. UMEK to solve customer needs as our duty, not to improve their own strength, optimize product performance, and strive to make the best ozone equipment At the same time, excellent UMEK pretty attention to training professional level, regular engineers and sales team for professional knowledge training so that improve the professional team.

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UMEK

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Working principle and application 工作原理和应用

臭氧杀菌原理

臭氧是一种强氧化剂，灭菌过程属生物化学氧化反应。臭氧灭菌有以下3种形式：

- 臭氧能氧化分解细菌内部葡萄糖所需的酶，使细菌灭活死亡。
- 直接与细菌、病毒作用，破坏它们的细胞器和DNA、RNA，使细菌的新陈代谢受到破坏，导致细菌死亡。
- 透过细胞膜组织，侵入细胞内，作用于外膜的脂蛋白和内部的脂多糖，使细菌发生通透性畸变而溶解死亡。

Ozone sterilization principle

- Ozone is a strong oxidant, sterilization process is a biochemical oxidation reaction. O_3 sterilization has the following three forms:
- Ozone can oxidize the decomposition of bacteria within the bacteria enzymes, so that bacteria inactivated death.
- Directly with bacteria, viruses, destruction of their organelles and DNA, RNA, so that the metabolism of bacteria is destroyed, leading to bacterial death. through the cell membrane tissue, invasive cells, the role of the outer membrane of the lipoprotein and the internal lipopolysaccharide, so that the occurrence of permeability loss of bacteria and dissolved.



臭氧应用

- 污水处理、纯净水消毒、去COD
- 游泳池水处理
- 畜禽养殖用水杀菌
- 食品有机处理、改善口感
- 漂白脱色处理

Ozone application

- sewage treatment, pure water disinfection, to COD and so on
- Swimming pool water treatment
- Livestock and poultry breeding water sterilization
- Food organic treatment, improve the taste
- Bleach bleaching treatment



饮用水处理 Drinking water purification

产品特点

臭氧的应用基础是其极强的氧化能力与杀菌性能，使用臭氧可以多个方面提高饮用水的质量，它可以用于对饮用水的消毒，也可以去除水中的颜色和异味。它可以去除水中溶解的金属和有机物杂质。还可以改善过滤池的运行状况。臭氧目前正逐渐取代氯成为饮用水消毒的主要手段，因为氯可以和水中的有机物结合，而生成氯化有机物，它已经被证明是致癌物，在自然界中也很难被分解。但是，臭氧对水处理无残留，无有害分解产物，是净化生活饮用水的最佳选择。

Product features

Application of ozone is based on its strong oxidizing capacity and bactericidal properties. The ozone can improve drinking water quality . It can be used for the disinfection of drinking water and removal color and odor from water, also can remove dissolved metal and organic impurities in water. Ozone is gradually replacing chlorine as the main means of drinking water disinfection now, because chlorine can be combined with organic matter in water, and the formation of chlorinated organic matter, it has been proved to be carcinogens, in nature is also difficult to be broken down. However, ozone treatment of water without residue, no harmful decomposition products, it is the best choice for the purification of drinking water.

臭氧作用

- 消毒，如杀灭微生物
- 除异味
- 除腐质物（脱色）
- 改善口感
- 铁和锰的氧化
- 降解农药

Function

- Disinfect, such as killing microorganisms
- Remove odors
- Remove humus
- Improve the taste
- Oxidize iron and manganese
- Degrade pesticide



03

Swimming pool water treatment 游泳池水处理











我公司经过多年的研究和应用经验，开发了游泳专用臭氧发生器，其设备性能可与进口产品相媲美，该发生器凭借其领先的臭氧放电技术，稳定、可靠的品质在游泳行业打造臭氧知名品牌。

After research and applications for years, our company has developed ozone generators dedicated for swimming, whose performance is comparable to imported machines. Depending on its advanced ozone discharge technology and stable and reliable quality, our ozone generator has built a well-known brand.

游泳池水处理 Swimming pool water treatment

产品特点

- 游泳专用臭氧发生器采用负压技术，其工作原理是：由射流器或者其他方法取得负压（真空度），使空气流动进入有热再生空气干燥器。有热干燥器是根据变温吸附（TSA）和变压吸附（PSA）的原理设计而成，即加压低温时吸附，常压高温时再生，其工作特点是工作压力适应范围，干燥气体露点低，再生耗气量小，切换时间长，操作简单方便。

- 臭氧是国际公认的环保型绿色杀菌剂，不会对环境造成任何二次污染，而氯制剂会与水中的有机物反应生成多种氯化有机化合物，如三氯甲烷、氯仿等，这些物质均为公认的致癌致突变物。当人游泳时，这些有毒物质会被人体所吸收（在水中人体每小时可吸收500毫升水）。水中的氯化有机化合物还会刺激人的眼睛及皮肤，从而引发红眼及皮疹。

- 臭氧是最强的氧化剂，可有效分解水中的腐植质，氧化水中的铁、锰离子，分解水中散射光线的微小有机体，从而大大提高水的清澈度，使水呈现出美丽的蓝色，而氯制剂则无此效果。为使水呈蓝色，使用氯制剂的泳池，往往需加入硫酸铜盐，对人极为有害。





Product Features

- Ozone generators dedicated to swimming apply negative pressure technology, whose operating principle is as follow: getting negative pressure (vacuum degree) by jet aerator or other measures, and making air flow into heat regeneration air dryers. Heat dryers are designed according to the principles of temperature swing adsorption (TSA) and pressure swing adsorption (PSA). That is, absorb under low temperature and high pressure; regenerate under normal pressure and high temperature. Its operating features are good adaptability of operating pressure, low dew point of dry air, low gas consumption of regeneration, long switching time and simple and convenient operation.

- Ozone is the internationally recognized green environment-friendly fungicides which will not cause secondary pollution to the environment. And chlorine preparation reacts with the organic matter in water to produce various chlorinated organic compounds, such as trichloromethane, chloroform and so on, all of which are recognized carcinogen and mutagen. When swimming, these toxic substances will be absorbed by human body (500ml water will be absorbed by human body in waters). Chlorinated organic compounds in water will irritate people's eyes and skin, which will cause pinkeye and rash.

- Ozone is the strongest antioxidant, which will greatly improve water's clarity by effectively decomposing humus in water, oxidizing iron ion and manganese ion in water and decomposing microscopic organism which will scatter light in water. The water will appear beautiful blue. But chlorine preparation doesn't work at all. For the purpose of making water appear blue, in swimming pools with chlorine preparation, it usually needs to add copper sulfate salt, which is extremely harmful to human body.

05

Industrial wastewater treatment 工业污水处理

印染、石油、制药、颜料、电子、化工、镀膜、垃圾处理厂、食品废水、PET废水工业排放废水含有难生化有机物或有毒物质，臭氧所拥有的强氧化能力可分解难生化有机物，降解有毒有害物质，去除水中色度和异味，分解水中的苯酚及其衍生物，提高废水的可生化性，使污水达到排放或回用标准。另外，臭氧对炼化烟气脱硝处理具有显著效果。

Organic matters with poor biochemical performance or toxic substances will be generated from dyeing, oil, pharmaceutical, paint, electronics, chemical, coating, waste disposal plant, food wastewater, PET wastewater and industrial wastewater. Ozone has strong oxidizability, which can discompose organic matters with poor biochemical performance, degrade toxic or harmful substances, remove water's color and odors, discompose phenol and its derivatives in water, and improve the biodegradability of wastewater, making wastewater meet emission or reuse standard. Moreover, ozone has significant effect on denitration for refining smoke.

与常用的有机氯化物杀灭剂相比较，臭氧是一种强效的的生物杀灭剂。它不仅能抑制微生物生长，而且能持续减少系统中的有机杂质，补充水引入的或未过滤掉的杂质（用COD和AOX参数指示），无不良二季反应产生。

Compared with common organic chloride biocides, ozone has a strong effect, which can not only inhibit the growth of microbes, but continuously reduce organic impurities in system and impurities introduced by make-up water or impurities not being filtered (indicated by COD and AOX parameters). Meanwhile, there is no poor secondary reactions.









工业污水处理 Industrial wastewater treatment





对于一些有毒有害机难生化的废水，优曼康的臭氧技术都有独特的应用，同时也为循环水处理以及电厂给水、循环冷却水除藻与消毒方面提供安全保障。在造纸行业漂白，生产用水处理过程中，优曼康都发挥重要角色。

For the treatment of some toxic wastewater with poor biochemical performance, circulating water treatment and water supply to power plants, UMEK's ozone technology offers unique advantages. Also, it provide safety for algae removal and disinfection of circulating cooling water. During the process of bleaching in paper industry and productive water treatment, UMEK plays an important role.

臭氧在工业领域的应用

- 淡水、生产用水和冷却水消毒、电厂循环水处理
- 污水消毒、解读、脱色和除臭以及提高污水的可生化性
- 氧化净化，改善结垢状况
- 有机合成（臭氧分解加工）
- 污染物少

Applications in industry field

- Disinfection of fresh water, productive water and cooling water; circulating water treatment in power plants.
- Disinfection, detoxification, decoloration and deodorization of wastewater; improve wastewater's biochemical performance.
- Oxidation and purification; improve scaling phenomenon.
- Organic synthesis (Decomposition of ozone).
- Less pollutants.

07

Municipal sewage treatment 市政污水处理

臭氧可以分解难降解的有机物，提高污水的可生化性，杀灭抗氯性强的细菌和病毒，同时具有脱色，除臭的功效，并增加水中的溶解氧，改善水质。

Ozone can decompose refractory organic matter, improve the biodegradability of wastewater and kill bacteria and viruses with high chlorine resistance. It also has the effects of decoloration and deodorization. Meanwhile, ozone can also improve water quality by increasing the dissolved oxygen in

产品特点

- 采用高介电常数的陶瓷、玻璃、搪瓷放电体技术，使设备产生的臭氧浓度更高，运行更稳定。
- 电源采用高频技术，设备运行稳定，寿命长 、运行能耗低，节约电能。
- 自动化程度高，操作简单，运行时无须专人值守，系统对异常情况可以自动保护，更可根据用户需要增加PLC自动控制系统。
- 结构紧凑，占地少，环境适应能力强。
- 加氯所产生的次氯酸及其衍生物，严重腐蚀水处理系统及馆内设备和结构如网架、暖气等。
- 臭氧是最强的氧化剂，可有效分解水中的腐植质，氧化水中的铁、锰离子，分解水中散射光线的微小有机体，从而大大提高水的清澈度，使水呈现出美丽的蓝色，而氯制剂则无此效果。



Product feature

- Applying discharge technology of ceramic, glass and enamel with high permittivity, the machine produces the ozone with a higher concentration and can run more stably.
- The power supply adopts high-frequency technology, giving the machine a stable running and a longer working life with low operation consumption with which the power could be saved.
- The machine has a high degree of automation and it's easy to operate. It can run without being under watching. The operating system will automatically start the protection program under exceptional situations. In addition, PLC system for automatic control could be added as per customer's requirement.
- The machine demands a less space with a compact structure. And it has a strong adaption to environment.
- Hypochlorous acid and its derivative which are produced after adding chlorine will severely corrode water treatment system and swimming pool's machines and structures such as grid structure and heat.
- Ozone is the strongest antioxidant, which will greatly improve water's clarity by effectively decomposing humus in water, oxidizing iron ion and manganese ion in water and decomposing microscopic organism which will scatter light in water. The water will appear beautiful blue. But chlorine preparation doesn't work at all.



技术参数表 Technical data sheet

空气臭氧发生器 Air feeding ozone generator

型号 Model	臭氧输出 Ozone output (g/h)	额定功率 Rated power (Kw)	净重 Net weight (Kg)	反应尺寸 Reactor size (mm)		
				L	W	H
UMK-AF-5	5	0.08	17	360	120	185
UMK-AF-10	10	0.13	17	400	300	675
UMK-AF-15	15	0.12	18	450	150	250
UMK-AF-20	15	40	19	1000	120	180
UMK-AF-30	30	0.18	20	500	150	300
UMK-AF-40	40	0.35	20	500	340	820
UMK-AF-60	60	0.6	50	500	400	1200
UMK-AF-100	100	1.5	70	1700	600	500
UMK-AF-200	200	2.6	120	600	500	1700
UMK-AF-300	300	3.6	150	1000	1500	1800
UMK-AF-500	500	6	200	2000	1500	1800
UMK-AF-800	800	7.8	240	2300	1500	1800
UMK-AF-1000	1000	9	300	2500	1500	1800
UMK-AF-2000	2000	18	600	3500	1500	2000
UMK-AF-5000	5000	45	3000	5000	2000	2000
UMK-AF-10Kg	10000	90	5000	7000	2500	2200

氧气源臭氧发生器 O_2 feeding ozone generator

型号 Model	臭氧输出 Ozone output (g/h)	额定功率 Rated power (Kw)	净重 Net weight (Kg)	反应尺寸 Reactor size (mm)		
				L	W	H
UMK-OF-10	10	0.53	70	600	500	1200
UMK-OF-20	20	0.65	72	600	500	1500
UMK-OF-50	50	0.9	80	600	500	1700
UMK-OF-80	80	1.2	85	600	500	1700
UMK-OF-100	100	1.6	100	700	600	1800
UMK-OF-200	200	3	150	1200	700	1700
UMK-OF-300	300	3.6	170	1400	700	1950
UMK-OF-500	500	5	200	2000	1500	1800
UMK-OF-800	800	7.8	270	2300	1500	1800
UMK-OF-1000	1000	9	300	2500	1500	1800
UMK-OF-2000	2000	18	580	3500	1500	2000
UMK-OF-5000	5000	45	2850	4500	1800	2000
UMK-OF-10Kg	10000	90	5000	6000	2300	2000

* The above pictures and parameters are only for reference. We conserve all rights of parameter modification without prior notiication.
以上参数仅作参考，本公司保留在不预先通知的情况下修改参数的权力。

O_3Installation Cases 臭氧安装案例



市政污水 Municipal sewage



矿泉水生产 Mineral water production



食品加工用水 Food process water



饮用水 Drinking water



水产养殖 Aquaculture

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