HCZHUN

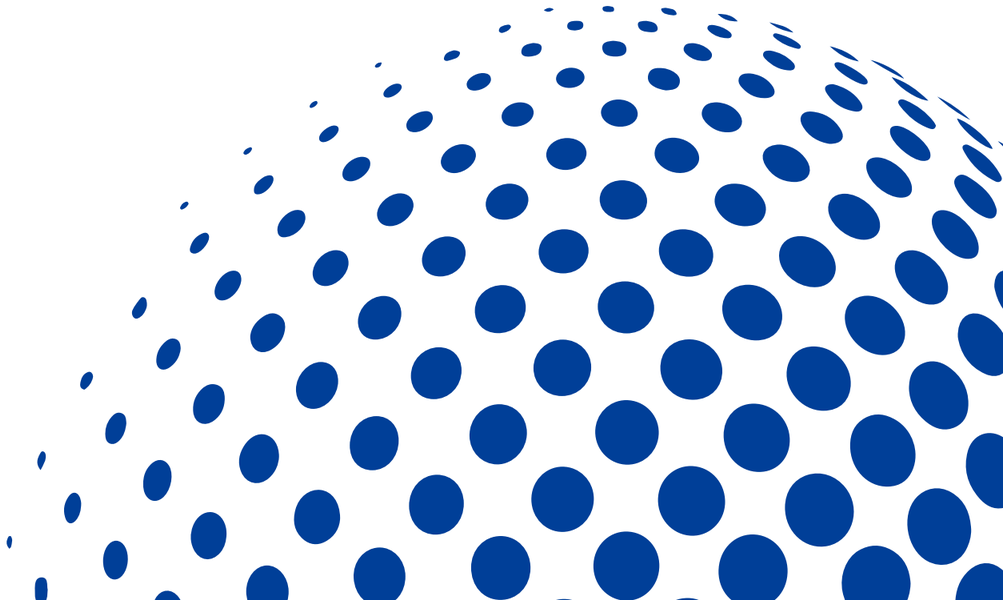
Expert in Water Oxidation&Disinfection and
Dosing Precipitation Technology

HCZHUN

Customer-centric
High quality development
Love is the key to happiness
The company is a community of shared future
for all employees

Shandong Hczhun
Environmental Protection
Equipment Co., Ltd.

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HCZHUN

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Corporate Mission:
Creating a society that creates value;
A platform for creating a healthy and prosperous life for employees

Corporate Vision:
Intelligent Manufacturing International
Leading Environmental Protection Equipment;
Building a century old brand with core technology

Corporate Values:
Customer-centric
High quality development
Love is the key to happiness
The company is a community of shared future for all employees



COMPANY INTRODUCTION

Shandong Hczhun Environmental Protection Equipment Co., Ltd. (hereinafter referred to as HCZHUN or the company) was established in 2007 and has been focusing on providing solutions for the water treatment industry for 16 years. HCZHUN is a high-tech enterprise integrating R&D, process design, production, and sales in the field of water oxidation disinfection and dosing precipitation. We are committed to customizing intelligent, efficient, and low-consumption water treatment solutions for customers. At present, HCZHUN intelligent manufacturing base covers an area of 25,000 square meters, has about 200 employees, and has business all over the world. We have a service team with specialization, innovation, love, dreams and caring for customers.

HCZHUN has two modern, environmentally friendly and intelligent manufacturing bases equipped with large-scale automated production equipment and environmental equipment. The company focuses on three core products: sodium hypochlorite generators, ozone generators, and intelligent dosing systems. Widely used in municipal water supply, municipal drainage, hospital sewage, industrial wastewater and other water treatment fields. The supporting R&D center and quality inspection laboratory have exquisite manufacturing technology and perfect quality inspection process to provide customers with worry-free products.

Harmonious win-win, creating miracles through innovation, is the business philosophy of HCZHUN. Insisting on providing high value-added solutions and high-quality products and services is the pursuit of HCZHUN. HCZHUN cooperates with Fortune 500 customers such as BEWG, Veolia, China Huadian, China Construction Group, Capital Group, etc., and has been recognized by the industry.

As a conscientious enterprise, we constantly improve the happiness index of our employees, make contributions to the society and protect the earth, which is also our lifelong pursuit. HCZHUN has always adhered to scientific and technological innovation, participated in the formulation of national standards and industry standards many times, and led the development of the industry. The products have passed a number of international certifications, including German TUV Rheinland explosion-proof certification, EU CE safety certification, ISO quality, environment, occupational health, intellectual property management system certification, and obtained 29 patents.

In the future, HCZHUN is willing to join hands with customers to strive for clear water and blue sky!





Development Path

Down To Earth
Hard Work And Development

2007 — The company was founded and the first chlorine dioxide generator came out

2010 — Obtain hygiene license issued by Shandong Health Department

2011 — Obtaining the hygiene permit for disinfection equipment issued by the Ministry of Health

2012 — Successfully launched a sodium hypochlorite generator and successfully applied a 20Kg/h chlorine dioxide generator to the Jingmen Thermal Power Plant project

2014 — The 7kg sodium hypochlorite generator and dosing device have been successfully applied to the Shenzhou Water Plant in the South to North Water Diversion Project, and this case has been selected as one of the "Top 100 Cases in China Environmental News"

2016 — Establishing strategic cooperation relationships with large state-owned enterprises such as Huadian Group, Datang Group, CECEP, CEEC, and Power China

2017 — The equipment has been successfully applied to China Tianyan Engineering; Respond to the the Belt and Road policy and ensure the drinking water safety of Pakistan's first rail transit

2020 — Subsidiary Shandong Hams Environmental Protection Technology Co., Ltd. was established and launched an ozone generator

2021 — Successfully launched 40kg HMS series ozone generator

2022 — Upgrade the product and launch the H5.0 sodium hypochlorite generator. Assist the supporting project of Zhangjiakou Chongli Water Plant for the 2022 Winter Olympics, providing a complete set of dosing devices

Disinfection and oxidation equipment

Dosing sedimentation equipment

2012 — Successfully launched various powder dosing devices, including powdered activated carbon, calcium hydroxide, PAM, and PAC

2015 — The complete chlorination and dosing system has been successfully applied to 12 water plants in the South to North Water Diversion Project

2016 — Strategic cooperation with the world's largest biopharmaceutical company, Adama under Sinochem Group, to provide large-scale dosing equipment every year

2017 — Provide integrated sewage treatment equipment for the "the Belt and Road" export project of CECEP and Bangladesh Payra Power Plant

2018 — Provide calcium hydroxide dosing systems for large companies such as Yamei Group and Yinying Group

2019 — Subsidiary Won Outstanding Supplier of BEWG

"Intelligent Modular Water Treatment Equipment"

HONOR AND QUALIFICATIONS

Technological Innovation

- National High-tech Enterprise
- National Science and Technology SMEs
- Pecialized and New SMEs
- Weifang City's Hidden Champion Enterprise
- Kuiwen Enterprises with Special Contributions
- Weifang Key Laboratory
- Weifang Municipal Industrial Design Center
- "One Enterprise One Technology" R&D Center



Industry Recognition

- Participate in the development of government standards for sodium hypochlorite generators
- Hygienic Requirements for Sodium Hypochlorite Generators (GB28233-2020)
- Participated in the research of the 13th Five-Year plan Water Special Project
- Evaluation, Verification and Standardization of Key Materials and Equipment in Urban Water Supply System
- Participate in the development of two group standards
- Technical Regulations for the Application of Sodium Hypochlorite in Urban Water Supply
- Sodium hypochlorite generator T/SDAS 462-2022
- Subsidiary Won Outstanding Supplier of BEWG



Technological Innovation

- Identification of scientific and technological achievements in Shandong Province
- Modern Smart Water Plant Self applicable Disinfection System
- Outstanding Achievements in Technological Innovation in Shandong Province
- Modern Smart Water Plant Self applicable Disinfection System
- Automatic pickling equipment for sodium hypochlorite electrolytic cells
- 4 invention patents
- 20 utility model patents
- 5 appearance patents
- 12 software copyrights



Professional Certification

- EU CE Safety Certification
- TUV Explosion-proof Certification
- ISO9001 Quality Management System Certification
- ISO14001 Environmental Management System Certification
- ISO45001 Occupational Health and Safety Management System Certification
- ISO27001 Information Security Management System Certification
- Intellectual Property Management System Certification
- Five Star Certification for After-sales Service System



SCOPE OF APPLICATION

- Waterworks Disinfection
- Rural Drinking Water Disinfection
- Sterilization, Algae Removal, Stripping Sludge Of Industrial Circulating Water
- Municipal Wastewater Disinfection
- Hospital Wastewater Disinfection
- Sewage Reuse
- Chemical Wastewater Decolorization, Degradation Of Cod
- Disinfection, Deodorant AndDecoloration In The ReuseOf Recycled Water
- Sterilization, Disinfection, DescalingOf Oil Injection Well Water
- Swimming Pool Water Disinfection
- Desulfurization And Denitration
- Industrial wastewater catalytic oxidation
- Printing And Dyeing Wastewater
- Breeding Wastewater
- Space disinfection



HCZHUN COOPERATIVE CLIENTS

中国华电 CHD
中国国电 CHINA GUODIAN
中国电建 POWERCHINA
中国节能 CECEP
中国能建 CEEC
中建八局 CHINA EIGHTH CONSTRUCTION
首创环保集团 CAPITAL ECO-PRO GROUP
BEWG 北控水务
中国水务 CHINA WATER
中国中车 CRRC
中国大唐集团有限公司 China Datang Corporation Ltd.
中广核 CGN
中节能国祯
中建环能 SCIMEE
中建三局
博世科 BOSSCO
CHEMCHINA 中国化工集团公司
洪城环境 Hongcheng Environment
VEOLIA
粤海水务
厦门水务 XiamenWater
华骐环保 HUAQITCCH
万德斯 wondux
久吾高科 JIUWU HI-TECH
北京排水集团
Yanan 延安水务环保集团
陕西省水务集团有限公司
TJWG 天津水务集团

Sodium Hypochlorite Generation System Flowchart



01 Water softener
02 Soft water stabilizer
03 Dilute brine dispenser
04 Sodium hypochlorite generator
05 Acid washing machine
06 Sodium hypochlorite storage tank
07 Hydrogen exhaust fan
08 Sodium hypochlorite dosing system
09 Salt feeder
10 Salt dissolving tank
11 Salt dissolving pump

H5.0 SODIUM HYPOCHLORITE GENERATOR



Pioneer Of Intelligent Modular Water Treatment Equipment Industry

Equipment specifications
7000-50000g/h

Applicable scope
Large and medium-sized disinfection treatment projects for water purification, sewage, circulating water, etc

Product Overview:

The HCCL series sodium hypochlorite generator is a device that uses a diaphragm free electrolysis method to electrolyze dilute brine and prepare low concentration sodium hypochlorite solution online. It has the characteristics of easy availability of raw materials, purity of products, and safety and reliability. Suitable for various types of chlorinated disinfection water treatment.

Product upgrade:



1. Intelligent Upgrade 5.0

Multiple central processors+cloud system networking control, adding multiple sensors compared to the H4.0 series, making it more intelligent.

2. Security upgrade

Collaborating with TUV Rheinland Germany, in accordance with EU ENSO 80079-36: 2016, IEC/TS 60079-32-1:2017EN 1127-1:2011, EN 60079-10:2:2015 explosion-proof certification standards, hydrogen, electrical, and airtightDesign upgrades in terms of corrosion and corrosion resistance.

3. Appearance upgrade

The design team of the German IF Award and Red Dot Award is dedicated to the design of geometric block overlays, vertically segmented layout patterns, and a distinct gray color scheme, paired with classic and innovative blue, showcasing aesthetic expertise and a technological atmosphere.

HCCL SODIUM HYPOCHLORITE GENERATOR

							
Equipment specifications	800-6000g/h	Equipment specifications	50-500g/h	Equipment specifications	50-500g/h	Equipment specifications	50-200g/h

Product features:

1. Raw material feeding system

① The high-efficiency salt feeding machine designed by HCZHUN Patent is made of PVC and 304 stainless steel, with higher corrosion resistance and negative pressure feeding, which is more efficient and safe;

② The corrosion-resistant automatic water replenishment valve independently designed by HCZHUN has a mechanical structure that does not require electrical control and has high stability;

③ The patented salt filtration device designed by HCZHUN is located at the bottom of the salt dissolving tank to ensure the concentration of concentrated salt water;

④ The concentrated brine metering pump provides independent supply and stabilizes the flow of concentrated brine;

⑤ The constant pressure control of the dilution water pump effectively reduces the impact of changes in water supply pressure on flow.

2. Electrolytic system

① Imported brand MAGNETO electrode, using pure titanium as the substrate and MMO special technology coating, generates effective chlorine;

② The plate tube electrolytic cell designed by HCZHUN Patent is transparent and visible, allowing for observation of the electrolysis status at any time;

③ The generator room is equipped with multiple sensors to monitor the operating status from multiple perspectives such as temperature, flow rate, and pressure;

④ The system can automatically determine the timing of pickling and complete online automatic pickling. It can also observe electrode scaling through a transparent electrolytic cell, timely human intervention, and start automatic pickling with one click.

3. Hydrogen exhaust system

① Install a forced hydrogen exhaust fan, ensuring that the hydrogen concentration after dilution is less than 1%;

② Install wind pressure monitoring in the hydrogen discharge pipeline to ensure the safe operation of the hydrogen discharge system;

③ Set up a hydrogen detector to detect the hydrogen concentration in the equipment room in real time. Once it exceeds the standard, the electrolysis unit will automatically stop running.

4. Intelligent control system

① The bidirectional communication function of the IoT, precise algorithms, and full process prediction of the operation status of various components, achieving fully automatic operation of the system;

② Automatic fault alarm and remote fault diagnosis;

③ Intelligent dosing system, which can achieve fully automatic and precise dosing Control;

④ A mobile app that enables remote networking monitoring.

Product Model

Model	Available Chlorine Production (g/h)	Water Consumption (m^3/h)	Salt Consumption (kg/h)	Electricity Consumption (VAC)	Operating power (kw)	Net weight (kg)	Overall Dimension (W×D×H) (mm)	Suggested Min Size of Equipment Room (mm)
HCCL-50	50	0.008	0.14	220	0.65	450	1120*850*1800	2500*2500*3000
HCCL-100	100	0.016	0.28	220	0.90	450	1120*850*1800	2500*2500*3000
HCCL-200	200	0.032	0.56	220	1.30	450	1120*850*1800	2500*2500*3000
HCCL-300	300	0.048	0.84	220	1.70	450	1120*850*1800	2500*2500*3000
HCCL-400	400	0.064	1.12	220	2.10	450	1120*850*1800	2500*2500*3000
HCCL-500	500	0.08	1.40	220	2.50	450	1120*850*1800	2500*2500*3000
HCCL-800	800	0.128	2.24	380	5.00	620	1220*1040*1800	5500*3200*3000
HCCL-1000	1000	0.16	2.80	380	5.50	620	1220*1040*1800	5500*3200*3000
HCCL-1500	1500	0.24	4.20	380	7.50	620	1220*1040*1800	5500*3200*3000
HCCL-2000	2000	0.32	5.60	380	9.50	620	1220*1040*1800	5500*3200*3000
HCCL-3000	3000	0.48	8.40	380	25	450	1220*1040*1800	14000*6000*4000
HCCL-4000	4000	0.64	11.20	380	31	445	1220*1040*1800	14000*6000*4000
HCCL-5000	5000	0.8	14.00	380	37	470	1220*1040*1800	14000*6000*4000
HCCL-6000	6000	0.96	16.80	380	42	475	1220*1040*1800	14000*6000*4000
HCCL-7000	7000	1.12	19.60	380	49	1010	1880*1260*2285	14000*6000*5000
HCCL-8000	8000	1.28	22.40	380	56	1020	1880*1260*2285	14000*6000*5000
HCCL-9000	9000	1.44	25.20	380	61	1035	1880*1260*2285	14000*7000*5000
HCCL-10000	10000	1.6	28.00	380	67	1040	1880*1260*2285	14000*7000*5000
HCCL-12000	12000	1.92	33.60	380	79	1090	1880*1260*2285	14000*7000*5000
HCCL-12500	12500	2	35.00	380	82	1100	1880*1260*2285	16000*7000*5000
HCCL-15000	15000	2.4	42.00	380	97	1120	1880*1260*2285	16000*7000*5000
HCCL-20000	20000	3.2	56.00	380	127	1130	1880*1260*2285	18000*7000*5000
HCCL-30000	30000	4.8	84.00	380	Design according to project requirements			
HCCL-40000	40000	6.4	112.00	380	Design according to project requirements			
HCCL-50000	50000	8	140.00	380	Design according to project requirements			

50-500g/h Product Model

Model	Available Chlorine Production (g/h)	Water Consumption (m^3/h)	Salt Consumption (kg/h)	Electricity Consumption (VAC)	Operating power (kw)	Net weight (kg)	Overall Dimension (W×D×H) (mm)	Suggested Min Size of Equipment Room (mm)
HCCL-50	50	0.008	0.14	220	0.65	450	1500*750*1700	3000*2000*3000
HCCL-100	100	0.016	0.28	220	0.90	450	1500*750*1700	3000*2000*3000
HCCL-200	200	0.032	0.56	220	1.30	450	1500*750*1700	3000*2000*3000
HCCL-300	300	0.048	0.84	220	1.70	450	1500*750*1700	3000*2000*3000
HCCL-400	400	0.064	1.12	220	2.10	450	1500*750*1700	3000*2000*3000
HCCL-500	500	0.08	1.40	220	2.50	450	1500*750*1700	3000*2000*3000

50-200g/h Product Model

Model	Available Chlorine Production (g/h)	Water Consumption (m^3/h)	Salt Consumption (kg/h)	Electricity Consumption (VAC)	Operating power (kw)	Net weight (kg)	Overall Dimension (W×D×H) (mm)	Suggested Min Size of Equipment Room (mm)
HCCL-50	50	0.008	0.18	220	0.35	95	700*500*1260	2100*2000*3000
HCCL-100	100	0.016	0.35	220	0.60	95	700*500*1260	2100*2000*3000
HCCL-200	200	0.032	0.70	220	1.10	95	700*500*1260	2100*2000*3000

Description of dosage selection:

1. The sodium hypochlorite generator can be used for electrolysis of salt water in municipal water plants, sewage treatment plants, hospital sewage, swimming pool water, thermal power plant circulation systems, etc

Its available chlorine demand (g/h)=design value of water volume (t/d) × Total chlorine demand concentration (mg/L) ÷ 24h

2. At present, there is no specific standard for the selection of specific chlorine dosage for disinfection treatment of various water bodies, which needs to be determined through experiments. The following experience suggests designing chlorine dosage (for reference only):

① Tap water: According to GB5749-2022, the range of free chlorine in the factory water when using sodium hypochlorite solution for disinfection in municipal tap water plants is required to be between 0.3 and 2mg/L

A. Small water supply station

The water source is surface water, with a designed chlorine dosage of 1-2 mg/L

The water source is groundwater with a designed chlorine dosage of 0.5-1mg/L

B. Large and medium-sized water plants need to design pre chlorination, post chlorination, and adding chlorination

The designed dosage of pre chlorination is 1-1.5mg/L (mainly used for oxidation of incoming water and removal of algae), and the designed dosage of post chlorination is 2-2.5mg/L (used for disinfection and disinfection treatment at the front end of the disinfection pool, with a disinfection time requirement of ≥ 30min). The designed dosage of adding chlorination is 0.5-1mg/L (used for water supply chlorination, mainly to ensure the residual chlorine value of the factory water supply)

② Domestic sewage: The recommended values in relevant literature are as follows:

A. 20~30mg/L of sewage after primary treatment

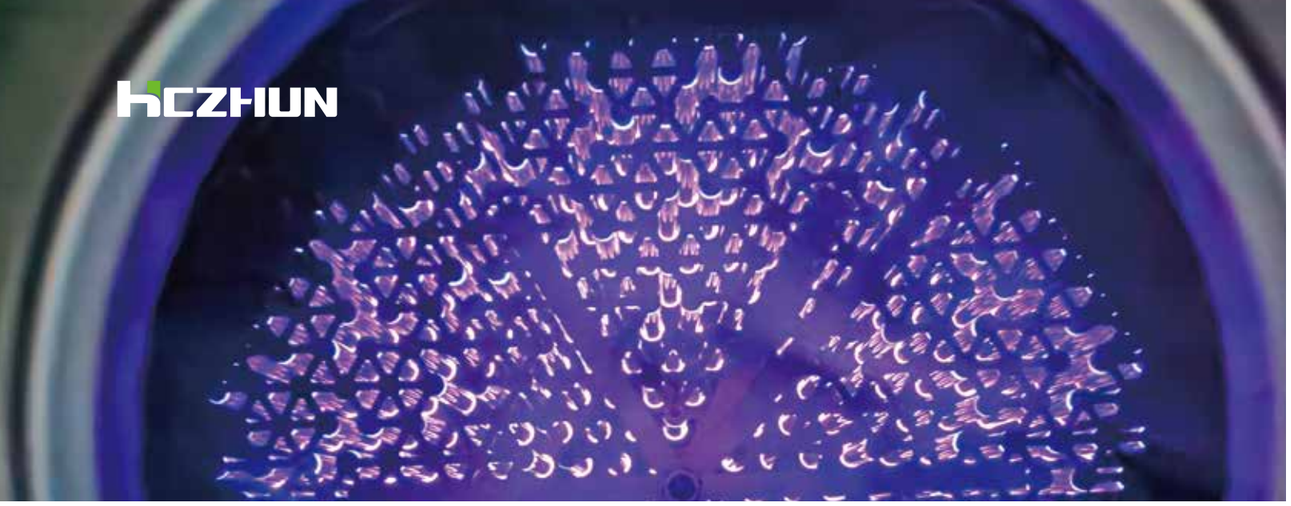
B. Sewage of incomplete manual Secondary treatment 10-15mg/L

C. Sewage 5-10mg/L after fully manual Secondary treatment

③ Swimming pool water: According to GB37488-2019 "Hygienic Indicators and Restriction Requirements for Public Places", when using free chlorine agents for disinfection, the range of free residual chlorine in swimming pool water is required to be within

0.3-1.0mg/L, according to experience, the disinfection effect can be achieved when the dosage of swimming pool water is 2mg/L, but the chlorine dosage needs to be adjusted according to changes in the pool's pedestrian flow.

The treatment of hospital sewage, circulating water, and other water bodies can be linked for technical docking to facilitate precise selection

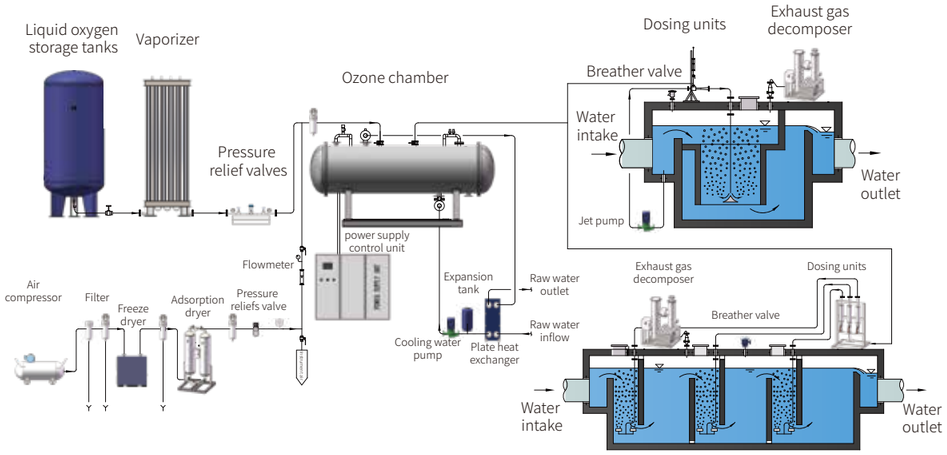


HMS Ozone Generator

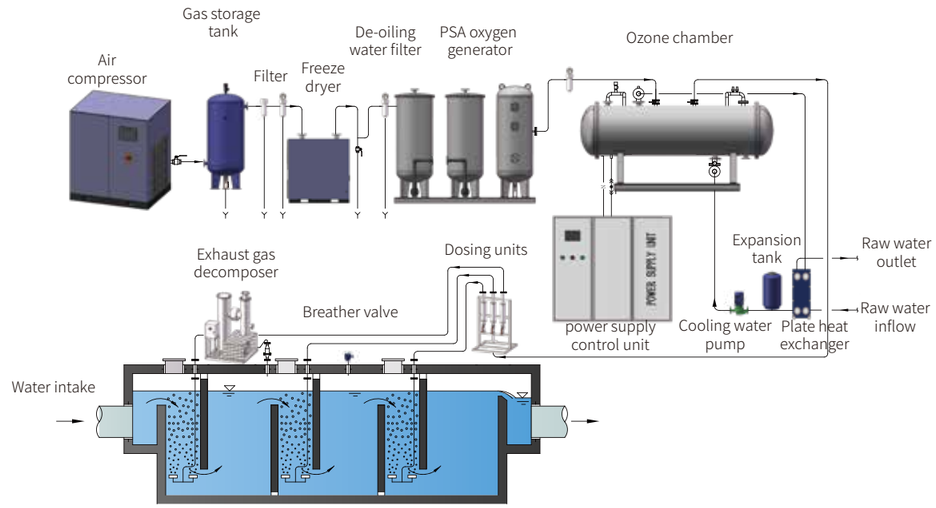
Technical advantages of HMS series ozone generators

- Ozone dedicated series resonant boost technology;
- Ozone specific density modulation power supply technology;
- Ozone dedicated power control drive circuit;
- Ozone electrode tube protection technology against electric breakdown;
- Realizing 10-99% linear ozone power regulation;
- Complete ozone machine power protection technology;
- Ozone dedicated detection and protection circuit;
- Ozone specific capacitive load transformer technology;
- Anti crushing protection technology for medium in ozone generator room.

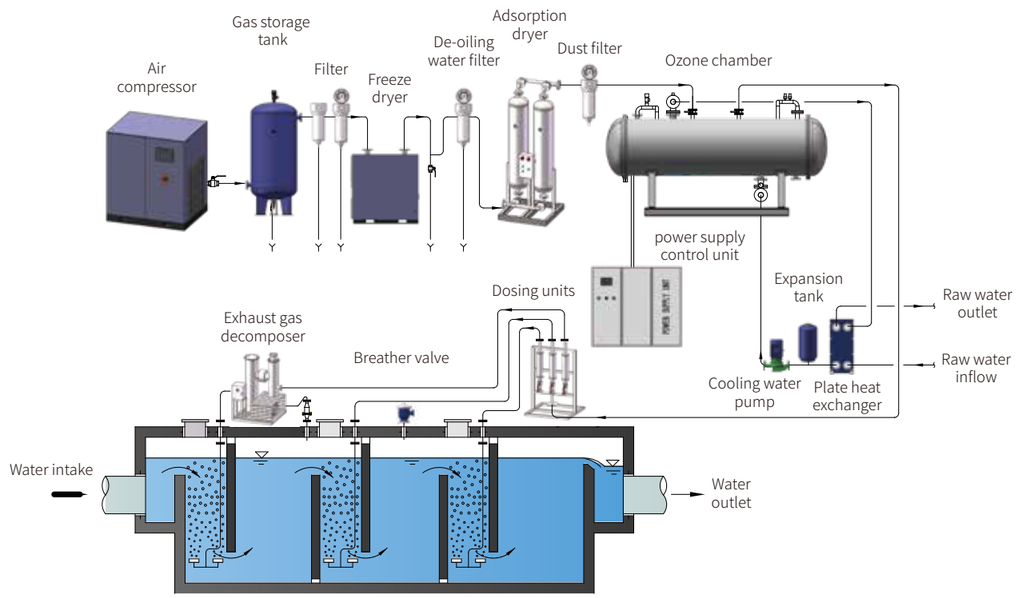
Ozone Generation System Flow of Liquid Oxygen Source



Ozone Generation System Flow of PSA Oxygen Generation Source



Ozone Generation System Flow of Air Source

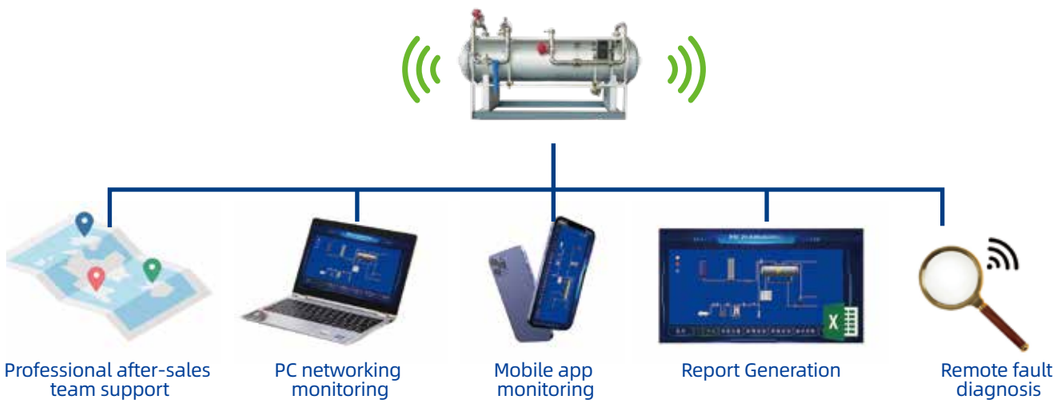


HMS Large Scale Ozone Generator



Technical parameters - Oxygen source

Model	Ozone Production (kg.o³/h)	Power/Voltage (KW/V)	Cooling Water Inlet and Outlet Diameter (DN)	Gas Source Inlet Diameter (DN)	Net Weight (kg)		Dimensions(m)	
					Generator	Power Supply Cabinet	Generator	Power Supply Cabinet
HMS-25K	25	200/380	125	65	3000	2600	4.2*1.3*2.1	4.1*1.1*2.12
HMS-30K	30	240/380	125	80	3400	3100	4.2*1.4*2.2	4.1*1.1*2.32
HMS-35K	35	280/380	125	80	3800	3600	4.2*1.5*2.2	4.5*1.2*2.32
HMS-40K	40	320/380	125	80	4300	4400	4.3*1.6*2.3	4.9*1.2*2.32
HMS-50K	50	400/380	150	100	5100	5600	4.3*1.7*2.5	4.9*1.3*2.32



HMS Medium Scale Ozone Generator

Pioneer Of Intelligent Modular Water Treatment Equipment Industry



Technical parameters - Oxygen source

Model	Ozone Production (kg.o³/h)	Power/Voltage (KW/V)	Cooling Water Inlet and Outlet Diameter (DN)	Gas Source Inlet Diameter (DN)	Net Weight (kg)		Dimensions(m)	
					Generator	Power Supply Cabinet	Generator	Power Supply Cabinet
HMS-4K	4	32/380	40	32	820	780	2.5*1.0*1.8	2.0*0.8*2.1
HMS-5K	5	40/380	50	40	980	780	2.5*1.0*1.8	2.0*0.8*2.1
HMS-6K	6	48/380	65	40	1200	780	2.5*1.1*1.9	2.0*0.9*2.12
HMS-8K	8	64/380	65	40	1300	1000	2.5*1.1*2.0	2.0*0.9*2.12
HMS-10K	10	80/380	80	50	1500	1400	2.6*1.2*2.0	3.0*0.9*2.12
HMS-12K	12	96/380	80	65	1700	1600	2.6*1.3*2.1	3.2*0.9*2.12
HMS-15K	15	120/380	100	65	1900	1900	2.6*1.4*2.2	4.0*1.1*2.12
HMS-20K	20	160/380	100	65	2500	2200	2.7*1.5*2.3	4.0*1.1*2.12

Equipment advantages



HMS Small Scale Ozone Generator



"Pioneer Of Intelligent Modular Water Treatment Equipment Industry"

Technical parameters - Air source

Model	Ozone Production (kg.o³/h)	Power/Voltage (KW/V)	Cooling Water Inlet and Outlet Diameter (DN)	Gas Source Inlet Diameter (DN)	Net Weight (kg)	Dimensions(m)
HMS-250	0.25	4/380	20	15	600	1.5*0.8*1.9
HMS-500	0.5	8/380	25	20	900	1.6*0.8*1.9
HMS-1000	1	16/380	32	25	1100	2.7*0.8*1.9
HMS-1500	1.5	24/380	40	25	1300	2.7*0.8*1.9

Technical parameters - Oxygen source

Model	Ozone Production (kg.o³/h)	Power/Voltage (KW/V)	Cooling Water Inlet and Outlet Diameter (DN)	Gas Source Inlet Diameter (DN)	Net Weight (kg)	Dimensions(m)
HMS-500	0.5	4/380	20	15	600	1.5*0.8*1.9
HMS-1000	1	8/380	25	20	900	1.6*0.8*1.9
HMS-2000	2	16/380	32	25	1100	2.7*0.8*1.9
HMS-3000	3	24/380	40	25	1300	2.7*0.8*1.9

CALCIUM HYDROXIDE DOSING DEVICE

Product Overview:

The lime powder dosing device is a complete set of equipment that stores, dissolves, and adds lime powder. Lime powder is stored in the lime silo, and the powder in the silo is loosened through an air flow arch breaking device and an activation hopper, and evenly fed to a precision feeder. The spiral conveying system sends the lime powder into the dissolution tank for full stirring and dissolution, and the prepared solution is transported by the dosing pump to the dosing point.

Product composition:

It is mainly composed of material storage system, powder frequency conversion feeding system, lotion preparation system, lotion metering and transportation system, pipeline backwash system and control system.

Product features:

Intelligent control, safe and reliable

Adopting PLC intelligent fully automatic control system, with a high degree of automation. Manually and automatically switch freely, with flexible control methods. The control system has the functions of material level, liquid level, water pressure, fault alarm, and automatic shutdown to ensure the safe operation of the system. Equipped with industrial Ethernet standard communication interface, it can achieve parameter upload and upper level monitoring.

Accurate measurement and stable operation

Regular vibration and air flow to prevent powder arching; The precision feeder ensures uniform and accurate feeding. Volumetric dissolving device, which can automatically add powder and water in a fixed ratio, and force mixing. The lime is completely dissolved, the lotion is evenly prepared, and the concentration is stable. The lime dosage is automatically adjusted with the change of water flow rate, achieving continuous and fully automatic solution addition.

Humanized design, efficient and convenient

A set of lotion preparation equipment can be equipped with multiple delivery metering pumps to achieve multi-point dosing.



Vacuum silo dust removal system, low labor intensity, and clean and hygienic environment. The backwash system prevents lime deposition from blocking the pipeline after long-term shutdown.

Powder activated carbon dosing device - wet dosing



Product Overview:

Wet dosing method is the process of transporting powdered activated carbon from a quantitative feeding equipment to a carbon slurry preparation tank, preparing it into a slurry, and then quantitatively adding it through a dosing pump. The concentration of the slurry is generally around 5%, and the dosage of powdered activated carbon is generally 5-10mg/L.

Product composition:

Mainly composed of vacuum feeding system (or tank truck feeding system), storage system, powder quantitative feeding system, slurry preparation system, slurry variable frequency conveying system, pipeline backwashing system, and control system, etc.

Product features:

Accurate measurement and stable operation

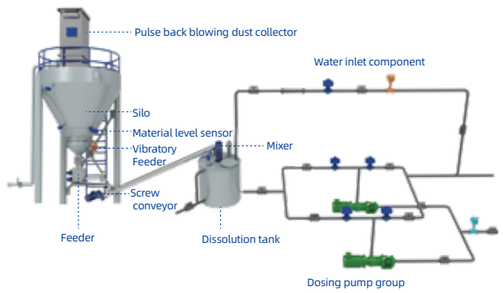
The dosage of activated carbon is automatically adjusted with the change of water volume, achieving continuous and fully automatic dosing. The activated carbon powder is quantitatively mixed with water and forced stirring, resulting in uniform slurry preparation, stable concentration, and good dispersion of carbon powder.

Intelligent control, safe and reliable

Adopting PLC intelligent fully automatic control system, with a high degree of automation. Manually and automatically switch freely, with flexible control methods. The control system has the functions of material level, liquid level, water pressure, fault alarm and automatic shutdown, ensuring the safe and reliable operation of the system. Equipped with an industrial Ethernet communication interface, it can achieve parameter upload and upper level monitoring.

Humanized design, efficient and convenient

A set of slurry preparation equipment can be equipped with multiple dosing pumps to achieve multi-point dosing. Vacuum feeding system, silo dust removal system, low labor intensity, and clean and hygienic environment. The backwash system can effectively prevent carbon powder deposition and blockage of pipelines after long-term equipment shutdown. The online weighing and measuring system can achieve precise measurement and dosing of dry powder.



Device specifications	The slurry preparation capacity is 100-5000L/h.

Powder activated carbon dosing device - dry method dosing



Product Overview:

Dry dosing method is a method of directly dosing (metering) powdered activated carbon into a jet device through a quantitative feeding device, and then adding the carbon powder to the dosing point through the jet device.

Device composition:

mainly composed of vacuum feeding system (or tank truck feeding system), storage system, dry powder feeding system, jet mixing system, anti carbon and water emitting system, control system, etc.

Product features:

Accurate measurement and stable operation

Adopting a high-speed mixing method using a jet mixer, the material and water are evenly mixed, with small measurement errors, eliminating the need for slurry configuration and measurement and transportation systems. Continuous and fully automatic dosing of activated carbon, with the dosage automatically adjusted according to the change of water flow rate, and the dosing ratio remains constant.

Intelligent control, safe and reliable

Adopting PLC intelligent fully automatic control system, with a high degree of automation. Manually and automatically switch fre ely, with flexible control methods. The control system has the functions of material level, water pressure, vacuum, fault alarm and automatic shutdown, ensuring safe and reliable operation of the system. Equipped with an industrial Ethernet communication interface, it can achieve parameter upload and upper level monitoring.

Humanized design, efficient and convenient

Vacuum feeding system and silo dust removal system. Low labor intensity, clean and hygienic environment. The backwash system ensures that carbon powder deposits and blocks the pipeline after long-term shutdown.

Device specifications	The feeding capacity of the powder is 5-200Kg/h.

Continuous automatic PAM solution preparation system



Product Overview:

The PAM solution preparation system is a fully automatic complete set of dosing equipment that accurately dispenses, dissolves, and matures polyacrylamide particles with water in a certain proportion. The main work flow is dry powder feeding machine feeding, closed silo storage, accurate feeder feeding, stainless steel dissolving box dissolution preparation, screw pump feeding to the feeding point to achieve the effect of coagulation aid.



Product composition:

AProduct composition: dry powder dosing system, dissolved water system, storage and mixing maturation system, automatic control system, precision dosing system, etc.

Product features:

Accurate dosing and stable operation

- The closed-loop control of the feeding speed of the spiral feeder ensures accurate feeding volume, and the silo vibrator and heating and moisture-proof device ensure normal feeding conditions.
- Under the specified preparation amount and continuous dosing conditions, the solution curing time is more than 1 hour and is thoroughly curing.
- The dosage of dry powder automatically follows the change of influent flow rate, ensuring a constant solution concentration.
- Adopting a water material pre mixing device to accelerate the hydration of the powder and avoid agglomeration of the powder.

Intelligent control, safe and labor-saving

- Adopting PLC intelligent fully automatic control system, with a high degree of automation.
- The control system has a fault alarm and automatic shutdown function, ensuring safe and reliable operation of the system. Equipped with an industrial Ethernet communication interface, it can achieve parameter upload and upper level monitoring. Customizable on demand, lightweight integrated body.
- Adopting a three channel overflow integrated structure, it occupies a small area, is easy to install, and has a low maintenance rate.

PAC/potassium permanganate dosing device



Product Overview:

Potassium permanganate dosing device is a fully automatic complete set of dosing equipment that accurately adds potassium permanganate powder to water after being prepared in a certain proportion. The main work process includes water jet suction, sealed storage tank storage and dissolution, and metering pump dosing to the dosing point to achieve the goal of purifying water quality. Solution ratio concentration: 0.05% -5%.



Product features:

Accurate feeding and stable operation

- The concentration of the drug solution can be set by the user, accurately configured, accurately added, and closed-loop controlled.

Intelligent control, safe and labor-saving

- PLC control cabinet can display the operating status of dry powder feeder, electromagnetic valve for controlling water inlet, agitator, etc. in real time, as well as the configured liquid volume and concentration. The human-machine interface is simple and visually displays fault information, making it convenient for users to troubleshoot in a timely manner.
- The device is equipped with flow, liquid level, and material level sensors, which output alarm signals when the liquid level and material level are too low to prevent equipment damage and subsequent water quality instability caused by equipment idle operation.
- The feeding, water inlet, and mixing and mixing processes of the entire system are fully automatic, without human intervention, with high automation and energy efficiency.

APPLICATION CASES



South to North Water Diversion Supporting Project - Shenzhou Water Purification Plant in Hengshui City, Hebei Province

Three HCCL-7000 sodium hypochlorite generators (available chlorine production of 7000g/h) are used,etc.



The Fourth Sewage Treatment Plant of Tengzhou City, Zaozhuang City, Shandong Province

Two sets of HMS-25000 ozone generators (with an ozone output of 25000 g/h).



The Fourth Sewage Treatment Plant of Tengzhou City, Zaozhuang City, Shandong Province

Two sets of HMS-25000 ozone generators (with an ozone output of 25000 g/h).



Shandong Lanling Mining Circular Economy Industrial Park Sewage Treatment Plant

Two HMS-8000 ozone generators (with an ozone output of 8000g/h) and one set of magnetic coagulation device.



Phase III Expansion Project of Sanshui Plant in Xiantao City, Hubei Province

Two HCCL-25000 sodium hypochlorite generators (with an available chlorine output of 25000 g/h) are used.



Shaanxi Yulin High tech Zone Water Purification Plant Phase I Upgrading and Renovation Project

Two HCCL-20000 sodium hypochlorite generators (with an available chlorine output of 20000g/h) are used.



Centralized Water Supply Project of Tongxing Water Plant in Anxiang County, Changde City, Hunan Province

Two HMS-3000 ozone generators (with an ozone output of 3000g/h), three HCCL-2000 sodium hypochlorite generators (with an available chlorine output of 2000g/h), ect.



Shandong Lanling Mining Circular Economy Industrial Park Sewage Treatment Plant

Two HMS-8000 ozone generators (with an ozone output of 8000g/h) and one set of magnetic coagulation device.



China Huadian Guizhou Qingzhen Power Plant Disinfection Equipment Renovation Project

Two HCCL-10000 sodium hypochlorite generators (with an available chlorine output of 10000g/h) are used.



Nanning Dongshan Water Plant Pipeline Network Extension Project in Guangxi

Two HCCL-15000 (available chlorine output 15000g/h) sodium hypochlorite generators are used.



Shanggang Water Plant in Jianhu County, Yancheng City, Jiangsu Province

One HMS-5000 ozone generator (with an ozone output of 5000g/h) is used.



The Second Water Plant in Dongguang County, Cangzhou City, Hebei Province

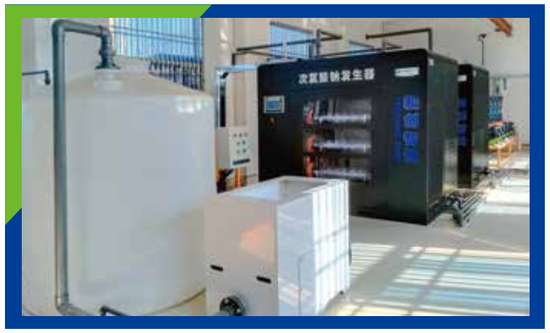
Two HMS-4000 ozone generators (with an ozone output of 4000g/h) are used.



Yixin Lake Emergency Response Project in Shuangliu District, Chengdu City, Sichuan Province
Two sets of 5m³ powder activated carbon dosing devices are used.



Veolia New Energy Wastewater Treatment System Project in Jiangmen City, Guangdong Province
One set of 50m³ calcium hydroxide (lime milk) dosing device is used.



Chengdong Water Plant, Donghai County, Lianyungang City, Jiangsu Province
The water treatment capacity is 50000 tons/day, and two HCCL-5000 sodium hypochlorite generators (with an available chlorine output of 5000g/h) are used.



Wastewater Treatment Plant in Xinjiang New Area, Yingtan City, Jiangxi Province
The water treatment capacity is 40000 tons/day, using two HCCL-5000 sodium hypochlorite generators (with an available chlorine output of 5000g/h), one PAC dosing device, ect.



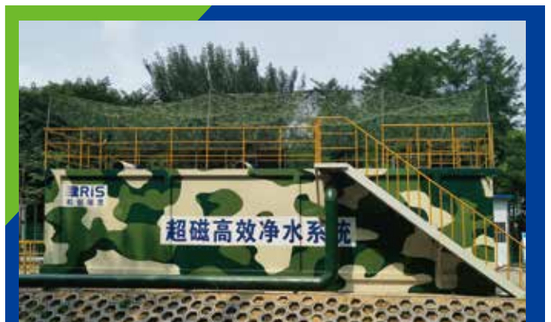
No.1 Water Purification Plant in High tech Zone, Jinan City, Shandong Province
Two sets of HCMag-408 magnetic coagulation devices, 1 set of sodium hypochlorite dosing device, 2 sets of PAM dosing devices, and 1 set of PAC dosing device.



Upgrading and Renovation Project of Yongzhou Sewage Treatment Plant in Hunan Province
Processing water volume of 100000 tons per day, using one set of PAM dosing device and one set of PAC dosing device.



Chandong Sewage Treatment Plant in Luoyang City, Henan Province
Nine sets of chlorine dioxide generators HC-20000 (available chlorine production capacity of 20000g/h) are used.



Emergency Treatment Project for Sewage Overflow in Dayu River, Weifang City, Shandong Province
One set of super magnetic high-efficiency water purification system is adopted.



80000 ton water supply project in Anlong County, Qianxinan Prefecture, Guizhou Province
Two HCCL-6000 sodium hypochlorite generators (with an available chlorine output of 6000g/h), one PAC dosing device, and one PAM dosing device are used.



Shaanxi Yan'an Environmental Protection Group Water Supply Company Beiguan Water Plant
Two HCCL-5000 sodium hypochlorite generators (with an available chlorine output of 5000g/h) are used.



Bangladesh Payra Power Plant Domestic Sewage Treatment Project
One set of 150m³ integrated sewage treatment equipment will be used.



Gaotanghu Water Supply Co., Ltd. of Mingzhongdu Water Group in Fengyang City, Anhui Province
One set of potassium permanganate dosing device is used.