



SODIUM HYPOCHLORITE GENERATOR

PROFESSIONAL
STERILIZATION SOLUTIONS
SERVICE PROVIDER



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**Weifang Hengyuan Environmental
Water Treatment Equipment Co.,Ltd.**

Company profile

Located in the beautiful kite capital of the world-Weifang City, Weifang Hengyuan Environmental Water Treatment Equipment Co., Ltd. is a production-oriented high-tech enterprise integrating research and development, production and sales of water treatment equipment, disinfection equipment and ecological toilets. Founded in January 2011, the company has built a standardized production workshop of more than 30,000 square meters.

The company has environmental protection engineering level 2 qualification, 7 invention patents, 36 utility model patents, 1 appearance patent, 6 software copyrights, 27 water-related approvals, 8 disinfection records and other related qualifications. We have passed ISO9001 quality system certification, ISO14001 environmental management system certification, ISO45001 occupational health and safety management system certification and after-sales service system certification and other authoritative certifications. And was named the national environmental protection equipment manufacturing industry (sewage treatment) standard conditions of the enterprise, high-tech enterprises, the province specializing in new small and medium-sized enterprises, the province innovative small and medium-sized enterprises, an enterprise a technology research and development center and other honorary titles.

The company's main products are: integrated (life, hospitals, breeding, etc.) sewage treatment equipment, air flotation machine (vortex concave, dissolved air, vertical flow, shallow), sedimentation tank (advection, vertical flow), ecological latrines, anaerobic reactor, the center of the rotating scraper, cyclone sedimentation tank sand remover, rotary mechanical grating, sludge treatment (plate and frame filter presses, belt filter presses, stacked screw machine), integrated water purification equipment, Filtration device (activated carbon filter, iron and manganese filter, quartz sand filter), dosing device (PAC dosing device, PAM dosing device, basic dosing device), disinfection equipment

(sodium hypochlorite generator, ozone generator, electrolysis chlorine dioxide generator, chemical chlorine dioxide generator, disinfection doser, slow-release disinfectant, small hospital wastewater treatment machine, oral, outpatient) Sewage treatment equipment, high-efficiency sewage disinfection equipment), dechlorination device (chemical feeder, acid mist absorber, dechlorination device), supporting series (PLC control cabinet, chlorine leakage alarm, residual chlorine detector, microcomputer controller, metering pumps, aeration machine, turbidity meter, water jets and other equipment).

At present, the company's sewage treatment equipment, disinfection equipment service areas covering municipal water supply, municipal sewage treatment, medical systems, residential communities, highways, scenic spots, various types of factories (aquaculture factories, chemical factories, etc.), industrial recycling of cooling water, water reuse and so on. Eco-toilets are widely used in public places such as municipalities, scenic spots, squares, harbors and busy commercial areas. "Hengyuan Xinda" brand series of products sell well throughout the country and in Mexico, Thailand, South Korea, Namibia, Sri Lanka and other countries at home and abroad, and have been well received by customers!

The company has strong technical force, has its own laboratory and a large number of management, scientific research and technical personnel, to provide customers with excellent pre-sales, sales and after-sales service, and according to the customer's water conditions, the design of reasonable water treatment equipment and equipped with the program, so as to achieve economic and practical, high quality and high efficiency.

Weifang Hengyuan Environmental Protection Water Treatment Equipment Co., Ltd. is committed to the water treatment industry in line with the business philosophy of "quality first, integrity-based" and the corporate purpose of "external achievement of customers, internal achievement of the staff" to build a good ecological environment to lay a solid foundation, but also the "green water" of mankind and society. Humanity and society "green water and mountains".

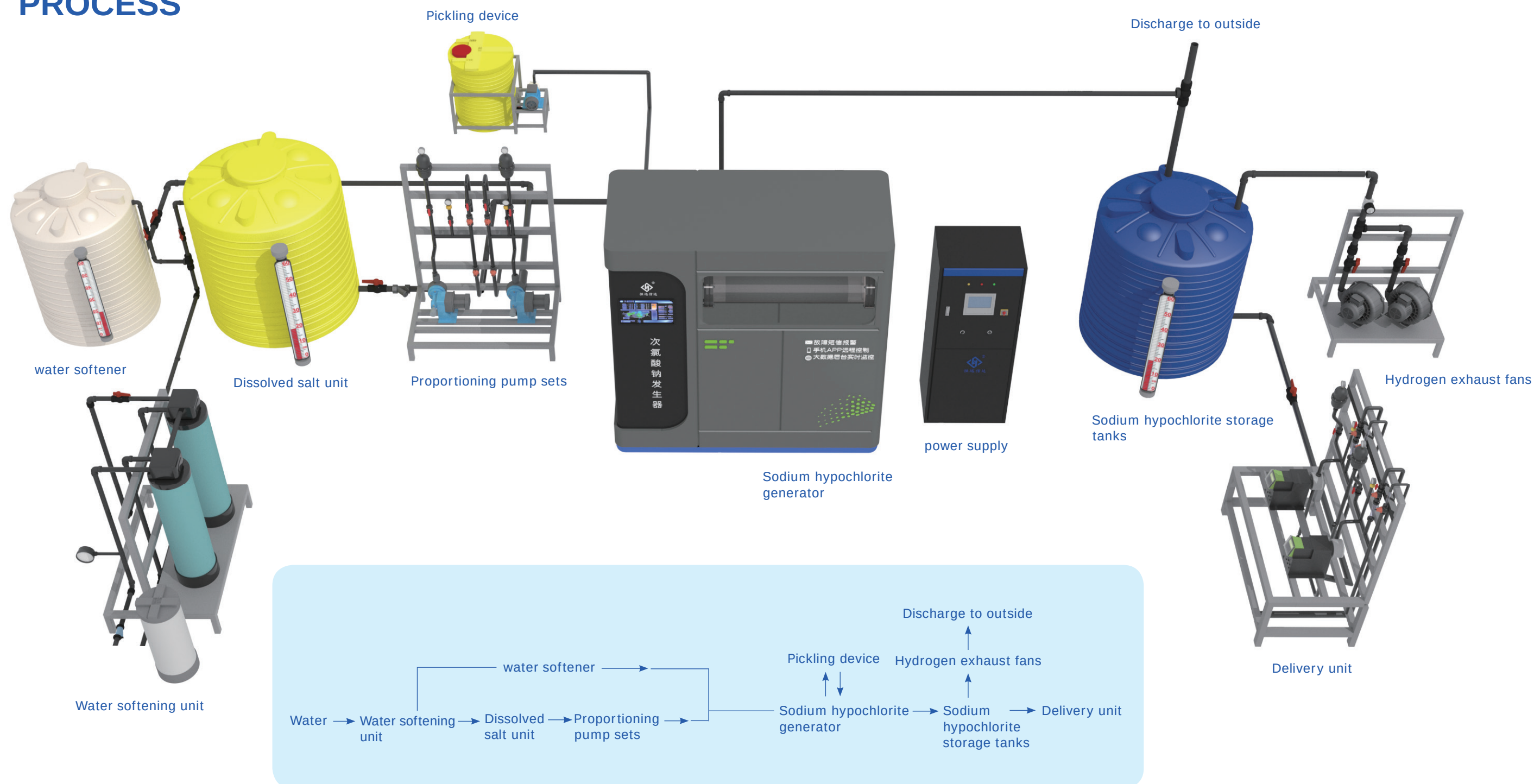


HONORARY QUALIFICATIONS



- ★ Environmental protection equipment manufacturing industry standardized conditions of enterprises
 - ★ High and New Technology Enterprises
 - ★ Provincial Specialized and Specialized New Small and Medium-sized Enterprises
 - ★ Environmental Protection Engineering Specialized Contractor Grade II Qualification
 - ★ Provincial Innovative Small and Medium-sized Enterprises
- ★ 27 approvals related to drinking water
 - ★ 1 appearance patent
 - ★ 7 invention patent
 - ★ 36 utility model patents
 - ★ 6 software copyrights
- ★ Sterilization record 8
 - ★ Quality management system certification
 - ★ Environmental management system certification
 - ★ After-sales service system certification
 - ★ Occupational Health and Safety Management System Certification

TECHNOLOGICAL PROCESS



Water softening unit

Calcium and magnesium ions in water are removed by ion exchange resin to reduce the hardness of raw water.

The water softening device adopts fully automatic water softener, and the valve head of water softener adopts fully automatic multi-way valve. The softening tank is made of high quality glass fiber reinforced plastic. Softening resin: CT100 food grade resin.

Dissolved salt unit

Salt dissolving device includes salt dissolving tank, salt dissolving pump, liquid level meter and other components. The main function is to dissolve salt, store saturated brine, and provide stable electrolysis brine for the system. As the concentration of saturated brine is less affected by the temperature, basically stabilized at 26.5%, which is conducive to the configuration of 2.5-5% dilute brine for electrolysis of the system.

Electrolytic system

Function: Transform AC power into DC power through high frequency inverter principle, and electrolyze the dilute salt water in the electrolyzer.

Tank body: tubular electrolyzer, plate electrode.

Electrolyzer shell material: PVC + PMMA (transparent high-strength organic glass).

Anode: Pure TAI substrate + precious metal oxide coating (Iridium, platinum and other rare metals).

Cathode: Pure TAI base material.

Sodium hypochlorite dosing unit and hydrogen drainage system

Sodium hypochlorite solution dosage: electromagnetic diaphragm metering pump or mechanical diaphragm pump dosage, sodium hypochlorite solution dosage can be based on the residual chlorine signal and flow signal, frequency conversion dosage.

Signal: residual chlorine signal and flow signal are divided into 4-20ma signal and pulse signal.

Metering pump: frequency control and current signal and pulse signal.

Specifically according to the site conditions to choose before adding chlorine and after adding chlorine dosage.

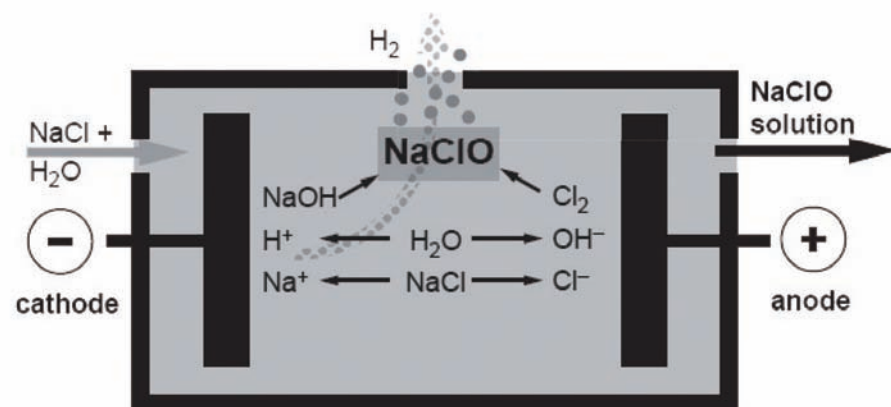
control system

Adopt Siemens PLC intelligent control system. With Ethernet or 485 communication mode, it can be connected to the upper computer or the central control room to realize remote visualization supervision; realize synchronous uploading of data: through the analysis of big data, it can provide a strong guarantee for the subsequent supervision of equipment operation. With real-time view and operation functions of cell phone, PC and central control system.

Pickling unit

After running the sodium hypochlorite generation system for a period of time, the electrodes need to be cleaned regularly, and the acid cleaning cycle is 3 months, depending on the use.

Reaction Principle



Technical Parameters

- ◆ Power consumption: $\leq 5.0 \text{ kW} \cdot \text{h} / \text{kg} \cdot \text{Cl}_2$
- ◆ Dilute brine concentration: 2.5-5.0%
- ◆ Salt consumption: $\leq 3.5 \text{ kW} \cdot \text{h} / \text{kg} \cdot \text{Cl}_2$
- ◆ Effective concentration: 6000-8000ppm

Working Principle

- ◆ Reactions in an electrolytic cell:
 $2\text{NaCl} + 2\text{H}_2\text{O} = 2\text{NaOH} + \text{Cl}_2 + \text{H}_2 \uparrow$
 $2\text{NaOH} + \text{Cl}_2 = \text{NaClO} + \text{NaCl} + \text{H}_2\text{O}$
- ◆ Total Reaction Format: $\text{NaCl} + \text{H}_2\text{O} = \text{NaClO} + \text{NaCl} + \text{H}_2$
- ◆ Anodic reaction: $2\text{NaCl} \rightarrow 2\text{Na}^+ + \text{Cl}_2 + 2\text{e}^-$
- ◆ Cathodic reaction: $2\text{H}_2\text{O} + 2\text{e}^- \rightarrow \text{H}_2 \uparrow + 2\text{OH}^-$

Professional Sterilization Solutions Service Provider





Decentralized rural
water supply

Decentralized rural
water supply

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Drinking Water - Heng Series

Sodium Hypochlorite Generator

Water treatment sterilization and disinfection equipment



Introduction of Sodium Hypochlorite Generator

Sodium hypochlorite is a strong oxidizer and disinfectant, which is generated by diaphragm-free electrolysis using widely inexpensive industrial salt as raw material.

Hengyuan Xinda brand sodium hypochlorite generator takes dilute brine as electrolyte, electrolyzes by direct current, generates sodium hypochlorite disinfectant, and then puts it into disinfected water body for disinfection. The core part is electrolytic electrode, intelligent PLC control system, and supporting equipment such as water softening unit, salt dissolving unit, sodium hypochlorite storing unit, and dosing unit.

Scope of Applications

For drinking water disinfection: rural decentralized water supply, township water supply, waterworks, secondary water supply for towns and communities.

Equipment Characteristics

- ◆ High degree of equipment integration;
- ◆ One-touch pickling, convenient and quick;
- ◆ Unique hydrogen discharge system, high security;
- ◆ Intelligent monitoring platform, can realize remote and local, cell phone, computer pc, central control room monitoring.

Equipment Parameters

Equipment Model	Effective chlorine production(g/h)	Quantity of flow(m ³ /h)	Supply Voltage	Installed power (KW)
HY-50	50	0.01	380V 50Hz	1.00
HY-100	100	0.02	380V 50Hz	1.50
HY-200	200	0.035	380V 50Hz	2.20
HY-300	300	0.05	380V 50Hz	2.50
HY-500	500	0.1	380V 50Hz	3.50
HY-800	800	0.13	380V 50Hz	5.00
HY-1000	1000	0.2	380V 50Hz	8.00
HY-1500	1500	0.25	380V 50Hz	11.00
HY-2000	2000	0.3	380V 50Hz	14.00
HY-3000	3000	0.5	380V 50Hz	22.00



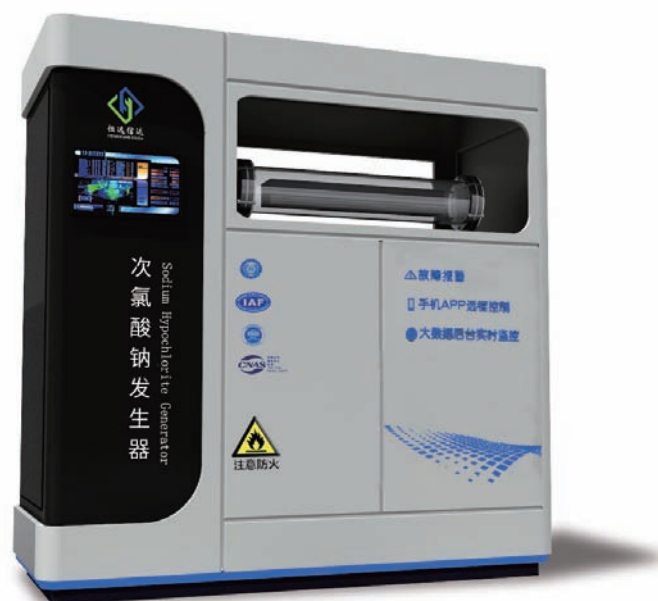
REUSE OF SEWAGE AND RECLAIMED WATER

● Sewage, medical sewage

Sewage and Water Reuse - Far Series

Sodium Hypochlorite Generator

Water treatment sterilization and disinfection equipment



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Scope of Applications

Used in municipal wastewater, sewage treatment plants, medical wastewater, slaughtering and breeding wastewater, swimming pool water and other application scenarios.

Equipment Characteristics

- ◆ Highly integrated equipment, easy to install;
- ◆ Stable production of effective chlorine;
- ◆ PLC intelligent control, set detection, liquid level interlock protection;
- ◆ Intelligent monitoring platform, help to supervise anytime and anywhere.

Equipment Parameters

Equipment Model	Effective chlorine production(g/h)	Quantity of flow(m ³ /h)	Supply Voltage	Installed power (KW)
HY-4000	4000	0.7	380V 50Hz	26
HY-5000	5000	0.8	380V 50Hz	35
HY-6000	6000	1.0	380V 50Hz	40
HY-7000	7000	1.2	380V 50Hz	45
HY-8000	8000	1.3	380V 50Hz	52
HY-10000	10000	1.5	380V 50Hz	60



INDUSTRIAL WATER AND CIRCULATING WATER

● Circulating
water

● Power plant
algae removal

Industrial Water and Circulating Water-Shin Series

Sodium Hypochlorite Generator

Water treatment sterilization and disinfection equipment



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Scope of Applications

Used in application scenarios such as printing and dyeing wastewater, industrial recycled water, paper wastewater, and organic industry.

Equipment Characteristics

- ◆ Patented appearance design, beautiful and atmospheric;
- ◆ Effective chlorine concentration 6000-8000ppm;
- ◆ PLC intelligent control, set detection, liquid level interlock protection system;
- ◆ Full monitoring of the operating status of each module, and can realize big data analysis.

Equipment Parameters

Equipment Model	Effective chlorine production(g/h)	Quantity of flow(m ³ /h)	Supply Voltage	Installed power (KW)
HY-10000	10000	1.5	380V 50Hz	70
HY-12000	12000	2.0	380V 50Hz	80
HY-15000	15000	2.5	380V 50Hz	100
HY-20000	20000	3.5	380V 50Hz	130
HY-30000	30000	5	380V 50Hz	Design according to project requirements
HY-40000	40000	6.5	380V 50Hz	Design according to project requirements
HY-50000	50000	8	380V 50Hz	Design according to project requirements

Industrial Water and Circulating Water-Da Series

Sodium Hypochlorite Generator

Water treatment sterilization and disinfection equipment



01
Highly integrated and intelligent

03
One-piece installation and easy
commissioning

02
Stable chlorine production and
low energy consumption

04
Simple operation and easy
maintenance

Industrial Water and Circulating Water-Da Series

Sodium Hypochlorite Generator

Water treatment sterilization and disinfection equipment

- ◆ Effective concentration of 6000-8000ppm.
- ◆ Equipped with water softening system, salt dissolving system, and regular injection.
- ◆ High degree of intelligence and automation
- ◆ PLC control, with Ethernet or 485 communication, can be connected to the upper computer.
- ◆ It can be interlocked with residual chlorine detection, hydrogen detection, liquid level detection and so on.



Chemical chlorine dioxide generator

Water treatment sterilization and disinfection equipment



Product Composition

Chemical chlorine dioxide generator, consists of feeding system, reaction system, safety system, automatic control system and dosing system.

Reaction Principle

- $\text{NaClO}_3 + 2\text{HCl} = \text{ClO}_2 + 1/2\text{Cl}_2 + \text{NaCl} + \text{H}_2\text{O}$
- $5\text{NaClO}_2 + 4\text{HCl} = 4\text{ClO}_2 + 5\text{NaCl} + 2\text{H}_2\text{O}$

Characteristics of use

- Negative-pressure type: Suitable for pools and non-pressurized piping.
- Positive-pressure type: suitable for dosing in pressurized pipelines and pools.

Electrolytic chlorine dioxide generator

Water treatment sterilization and disinfection equipment



Electrolytic chlorine dioxide generator is a kind of electrolysis device, it uses special electrode and electrolysis diaphragm, electrolysis of saturated brine, produce high efficiency mixed disinfection gas containing ClO_2 , Cl_2 , O_3 , H_2O_2 and other components, through the water jet will be high efficiency mixed disinfection gas and the body of water to be fully mixed to achieve disinfection of the purpose of treatment.

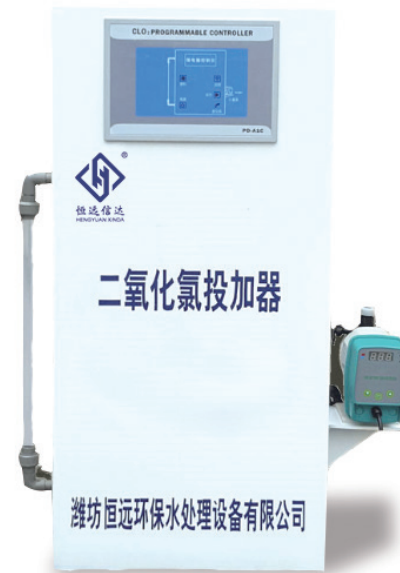
Raw materials used

- Industrial salt: GB/T5462-2003
- Refined industrial salt $\geq 99.10\%$

Characteristics of use

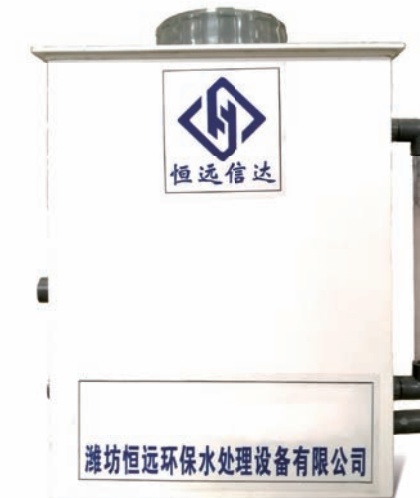
Suitable for pools, unpressurized pipeline dosing.

HY series sterilization dosing machine



- ◆ The dosing device is a complete set of equipment with storage, transportation and automatic control.
- ◆ The device is characterized by compact structure, simple safety, easy operation and use.
- ◆ The dosing device is mainly composed of solution tank, metering pump, electric control,
- ◆ pipeline, valve and so on (can be configured according to the actual requirements of the user).
- ◆ According to the concentration of the required agent, it is prepared in the solution tank, and the prepared solution is delivered to the dosing point or the designated system by metering pump (dosing pump).
- ◆ The device can also be customized according to the user's requirements of different processes, targeted design, can be personalized.
- ◆ This type of equipment can be widely used in water treatment, environmental protection, electronics food, medicine, construction and other industries.

HY series dilution sterilizer



Working Principle

Automatic slow-release delayed-pressure chlorination process, with a chlorine content of more than 75% of the solid agent as the main raw material, the water and the agent reasonably mixed with the disinfection and sterilization of the liquid produced, thrown into the pools, wells, pipelines and sewage tanks, to achieve the role of sterilization.

Product Benefits

- ◆ Low input cost and low utilization cost.
- ◆ Simple installation and operation, practical and reliable.
- ◆ Wide applicability, suitable for small-scale water plants in rural areas with a daily treatment capacity of less than 200 tons.

Dechlorination Equipment



HY series dechlorination device is suitable for removing residual chlorine in water after sterilization and disinfection by chlorine gas, sodium hypochlorite, chlorine dioxide and so on. This product is characterized by high efficiency, energy saving, simplicity, reliability, low cost, etc. It is the preferred equipment for secondary treatment of sewage. The main body of this equipment is made of special composite materials, durable. It can be customized according to the user.

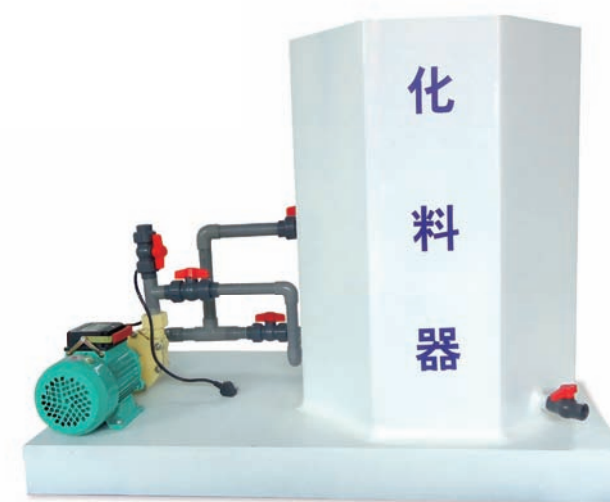
Working Principle

By the feeding port feeding quantitative dechlorination drugs, in proportion to the proportion and then injected into the appropriate amount of tap water, configured as a dechlorinating agent, according to the content of residual chlorine in the body of water, adjusting the flow rate of the feeding flowmeter, by the feeding pump and the treatment of water flow synchronization put into the reaction for a few minutes, the residual chlorine removal rate of more than 99%.

Product Benefits

This equipment is especially suitable for hospital sewage treatment, water reuse treatment, water algacide treatment, swimming pool water treatment and other excessive chlorine-containing water treatment.

Dissolution Machine



Product Overview

Small integrated dissolution equipment, also known as a chemical feeder, is used in conjunction with chlorine dioxide generators to uniformly dissolve solid pharmaceuticals into liquid pharmaceuticals.

Equipment Characteristics

Simple and convenient operation, high efficiency and low cost.

Adopting special corrosion-resistant and wear-resistant plastic chemical pump to form vortex circulation mixing water flow, with fast dissolving speed and thorough dissolving.

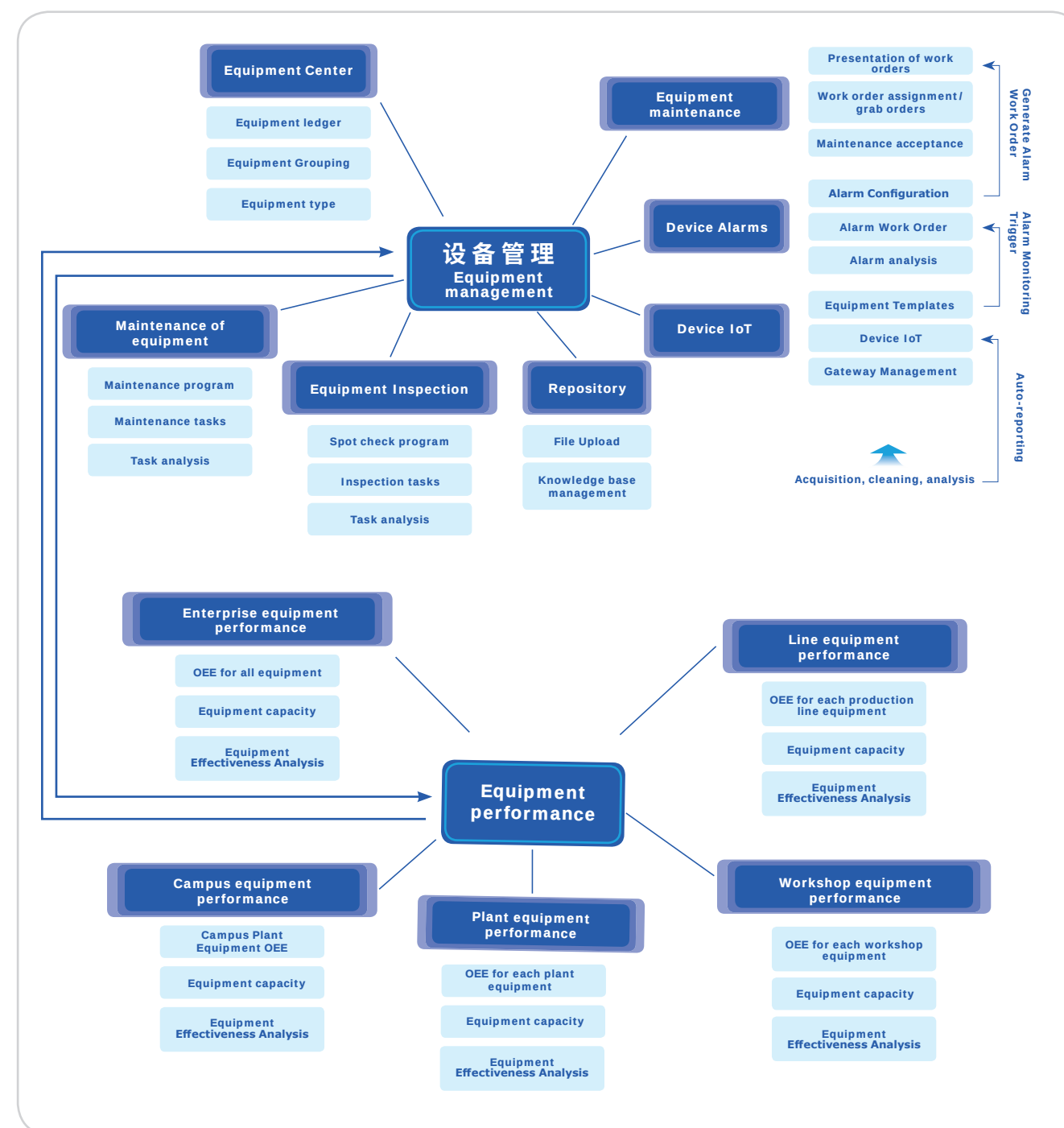
It has dual functions of materializing and lifting, which can lift the dissolved liquid directly to the storage tank.

Device IoT Management Cloud Platform



The IOT Management Cloud Platform integrates planned preventive maintenance, TPM (Total Productive Maintenance) and RCM (Reliability Centered Maintenance), and simultaneously supports the concepts of corrective maintenance, predictive maintenance and condition monitoring maintenance. Based on the equipment ledger and the creation of work orders, it rationally optimizes resources and transforms traditional reactive maintenance into proactive preventive maintenance. With the help of cloud computing, smartphones, and LOT devices, based on the four major functional segments of low code, data aggregation, visualization analysis, and intelligent prediction, it transforms the personal knowledge of maintenance personnel into an enterprise-wide maintenance knowledge base by establishing an equipment management system, tracking and recording the entire process of the historical activities of enterprise equipment maintenance, and using data and algorithms to help the enterprise to improve equipment availability, predict equipment failures, and perform preventive maintenance, reduce maintenance and purchase costs, and expand the service life of equipment to ensure production safety and improve production output efficiency.

Device IoT Management Cloud Platform



HENGYUAN ENVIRONMENTAL PROTECTION

TOTAL SOLUTION PROVIDER FOR WATER TREATMENT PROJECTS

Advantages of Device IoT Management Cloud Platform

IOT management cloud platform is a new type of network that connects various objects through information sensors and network technology, which can realize intelligent management and control of objects. It improves efficiency and saves costs, enriches information and expands services, innovates models and adds value.

inexpensive

Realize remote monitoring, control and management of equipment and systems to improve productivity, reduce energy consumption and operating costs.

topicality

Enables real-time monitoring and alerting of equipment and systems to help prevent accidents and failures.

personalized

Enabling personalized customization and intelligent interaction of devices and services. While providing a more convenient and seamless user experience.

intellectualize

Sensors, data collection and analysis enable automatic monitoring, control and optimization of equipment operating processes.

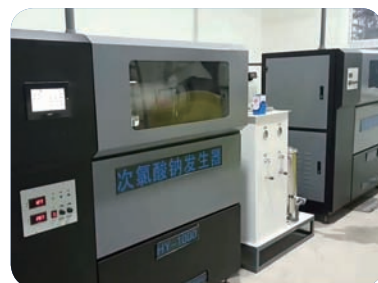
Device Management Platform-Device Alarm/Warning Screenshot



Engineering examples



Heyuan Water Plant Project,
Guangdong



Anhui Mingguang Water
Treatment Plant Project



Jiangsu Yangzhou Water Treatment
Plant Project



Yunnan Kunming Hospital Project



Hebei Gu'an Water Treatment
Plant Project



Xingyi Water Treatment Plant
Project, Guizhou



Hubei Tianmen Water Treatment
Plant Project



Xining New Rural Drinking Water
Project, Qinghai



Xinjiang Aketau Water Treatment
Plant Project



Guizhou Qianxi Nanzhou Drinking
Water Project



Fujian Longyan New Rural Drinking
Water Project



Jilin Songyuan Water Treatment
Plant Project

Choose a company from Hengyuan

