Haier Biomedical
Intelligent Protection of Life Science

Biomedical Waste Treatment Solutions

Medical Waste Incinerator
Microwave incinerator for medical waste
Fixed microwave incinerator for medical waste
Vehicle mounted microwave incinerator for medical waste

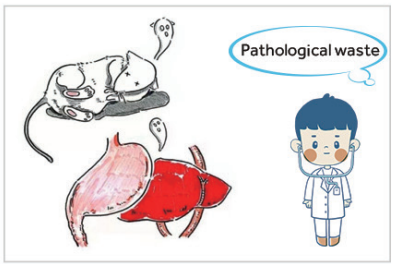
Biomedical Waste Treatment Solutions

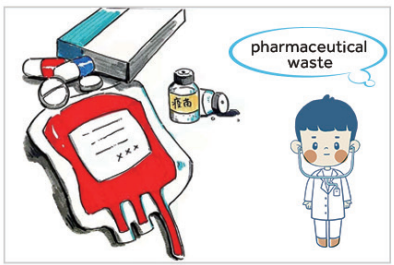
Product Information

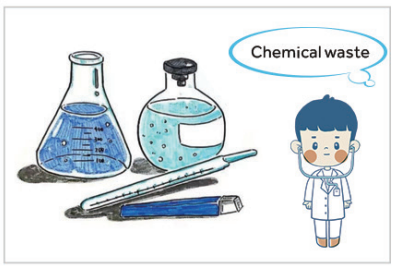
Medical waste is a subset of wastes generated at health care facilities, such as hospitals, physicians' offices, dental practices, blood banks, and veterinary hospitals/clinics, as well as medical research facilities and laboratories. Generally, medical waste is healthcare waste that that may be contaminated by blood, body fluids or other potentially infectious materials and is often referred to as regulated medical waste.

It is mainly divided into five categories:

- Infectious waste: medical waste with the risk of infection;
- Pathological waste: discarded human tissue generated during surgery as an example;
- Hazardous waste: such as medical needles, scalpels, glass test tubes;
- Pharmaceutical waste: such as expired, obsolete, deteriorated or contaminated waste drugs;
- Chemical waste: including discarded chemical reagents, chemical disinfectants, mercury sphygmomanometers, mercury thermometers.







Currently, there are four common medical waste treatment technologies:

	Advantage	Shortcoming
High Temperature Incineration	With a long history and a wide range of applications, large number of treatment and stable operation	Serious secondary pollution, especially dioxin pollution problem can not be resolved
Steam Sterilization	Superior disinfection effect, low residue risk	The processing process will produce toxic waste gas and waste liquid
Chemical Disinfection	Simple and convenient operation, rapid disinfection, low operating cost	It is more suitable for dry treatment and needs to be used together with crushing processing
Microwave Sterilization	Wide spectrum of disinfection bacteria, high sterilization efficiency, reducing energy consumption without dioxin pollution, easy operation and maintenance, low operating cost	-

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Medical Waste Incinerator

Scope of Application

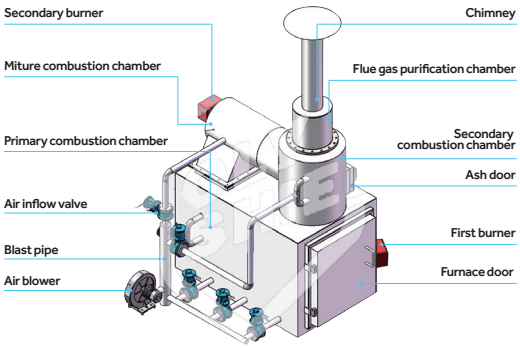
Incinerator is a kind of environmental protection equipment incinerating the waste gas, waste liquid, solid waste object fuel, medical waste, household waste, animal carcasses to achieve quantitative reduction, at the same time to achieve the use of part of the heat energy of the incineration medium of a product.

Product Advantages

- 3T+E — Adopts the patented technology of high-temperature pyrolysis and gasification in accordance with the design principle of 3T+E, and the whole system operates under negative pressure
- Suitable for all kinds of medical wastes, such as syringes, needles, gloves, braces, gauze, blood vessels, organs and other infectious wastes
- The emissions of gas and ash below the international emission standards
- Fully enclosed operation to avoid secondary pollution
- Small volume, space saving
- Easy to operate, energy saving, low cost

Components

Key Parts of Our Incinerator
Primary Chamber Chamber designed for maximum air flow and circulation, resulting in increased pyrolysis efficiency and reduced overall burn time
Secondary Chamber/Mixture Combustion Chamber Retains and re-burns the exhaust gases for minimum of 2 seconds at 850°C to meet EU guidelines
Blast Pipe and Air Inflow Valve Reasonable layout of air blast pipes and air inflow valves can precisely control the oxygen supplementation amount and oxygen supplementation position of the incinerator to achieve full combustion of exhaust gas and achieve smokeless and odorless effects
Fule Gas Purification Chamber The calcium bicarbonate in the flue gas purification chamber is fully neutralized with the acid gas in the exhaust gas to achieve the purpose of purifying the exhaust gas
Careee Burner Career burner is energy-saving, efficient, intelligent, fast in temperature increase, and has good combustion effect,at the same time it can provide a non stop ventilation system



Specifications

Example of a model of 200 kg/h	
Dimension of combustion chamber (m)	1.78*0.88*0.9
Dimension of the incinerator (m)	2.6*2.7*3.38
Refractory temperature (°C)	≤1350
Quantity of combustion chamber	Dual combustion chambers
Loading weight (kg)	6000
Operational temperature (°C)	550-1110
Brand of gas turbine	Riello, Italy
Fuel consumption	5-10kg (Diesel)
Exhaust gas burning time	> 2s
Combustion ratio	200kg/h
Thickness of the metal	8mm
Average ash (%)	3%

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Microwave Incinerator for Medical Waste

Scope of Application

The medical waste microwave treatment workstation adopts the method of first crushing and then microwave sterilization, to sterilize by microwave from the very beginning and to eliminate the effective transmission of secondary transport of medical waste to ensure the safety of the personnel during the collection and transport.

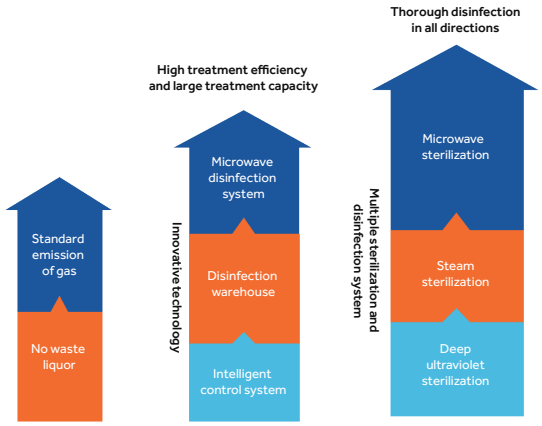
Product Advantages

Environmentally Friendly
Without waste liquid generated, standard emission of gas, nonradiative, safer to use

Diversified Products
Better combined products series, fixed and vehicle-mounted products applicable for more scenarios

Superior Performance
High treatment efficiency and large treatment capacity

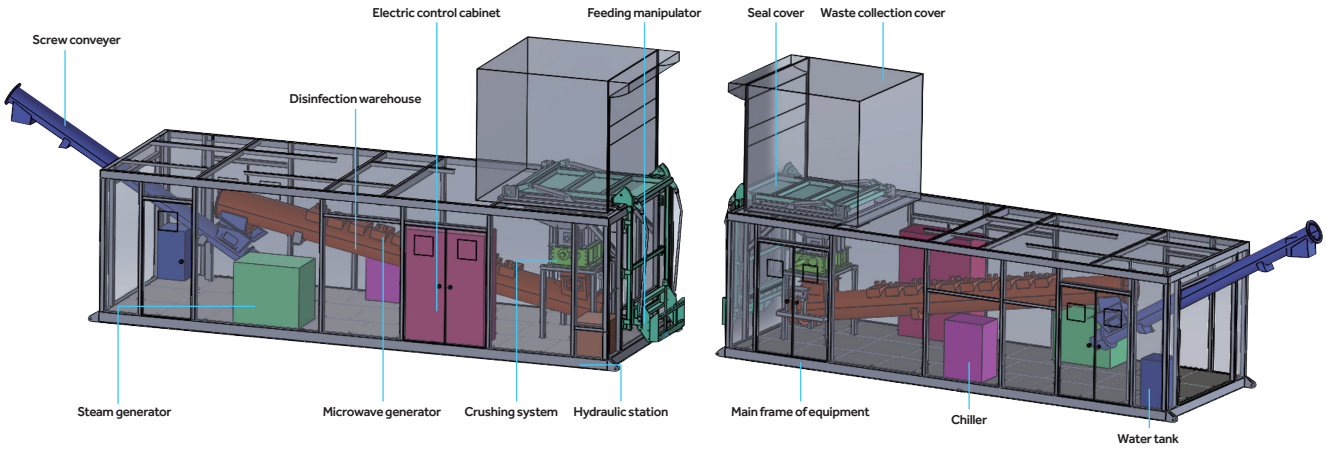
Innovative Technology
Multiple sterilization technologies (deep ultraviolet sterilization + steam sterilization + microwave sterilization), reaching the international advanced level



Product Parts

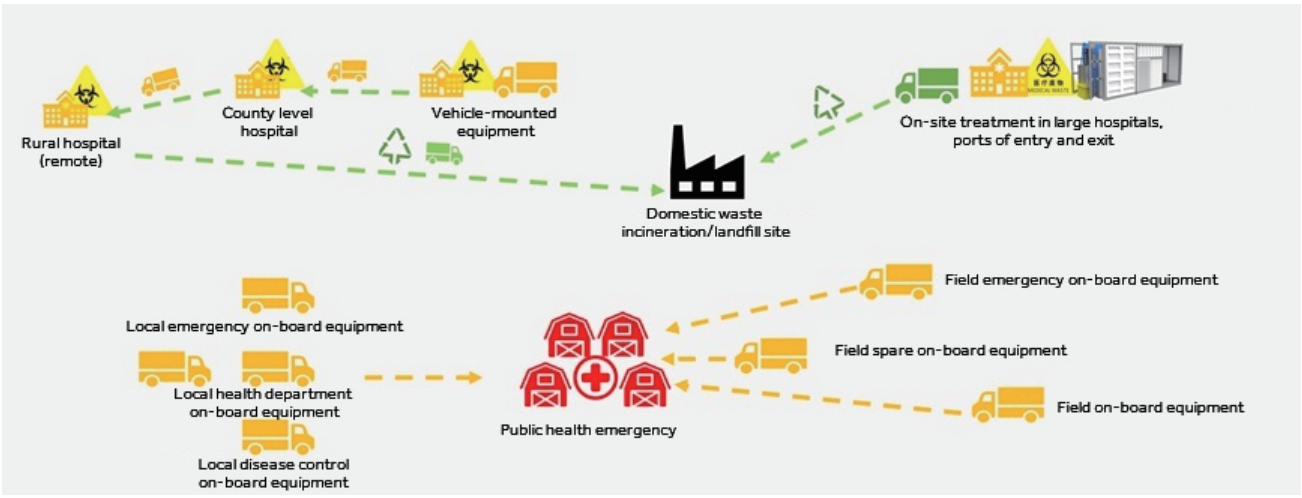
Standard microwave incinerator for medical waste consists of feeding system, crushing system, microwave disinfection system, off-gas treatment system, discharge system, electric control system and other subsystems

- Microwave frequency 2450MHZ, energy saving, uniform heating, slow heat loss
- The medical waste material can pass through the microwave radiation area within only 45 minutes with a higher discharge speed
- Visual and intelligent operation with independent core algorithm
- Highly integrated equipment, space saving, low noise, low energy consumption of equipment, driven by electric power only
- The crushing system uses internationally famous blades, making the equipment more resistant to damage



Fixed and Vehicle-mounted Types

- Fixed equipment can be installed in large hospitals and other places to avoid secondary pollution in the transport process
- Vehicle-mounted mobile equipment can be used for rapid sterilization and disinfection of medical waste and infectious pollutants in emergent public health events to ensure rapid deployment and nearby treatment



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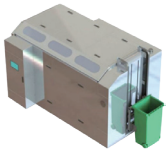
Fixed Microwave Incinerator for Medical Waste

Product Advantages

- Slow thermal loss: on the condition that the same disinfection effect by microwave heating and ordinary heating, the temperature of the waste by microwave is much lower than that of ordinary heating. Waste after microwave disinfection is non-toxic, without residue of light damage
- Main components including the brush blade and the microwave generator of internationally famous brand, the sterilization chamber made of food-grade stainless steel corrosion resistant
- Environmentally friendly: without acid gas, dioxins and other pollutants generated
- Microwaves have a wide range of bacterial species and sterilize all kinds of microorganisms and pathogens
- Suitable for centralized treatment of medical waste disposal center
- On-site treatment in large and medium-sized hospitals
- Standard with IoT remote monitoring function which allows the user to check the temperature of the chamber, the power of microwave generator, disinfection running time, microwave leakage remotely.
- Energy saving: microwave heating is uniform of strong penetrability without energy loss to ensure excellent energy saving effect
- 0.15T 10T A single unit can meet the daily requirements of processing capacity of 0.15T-10T per day
- Ports, airports, high-speed rail and other specific disposal needs
- High disinfection efficiency and thorough sterilization

Specifications

Model	JRX-0.15T	JRX-0.5T	JRX-1.2T	JRX-3T
				
Treatment capacity (kg/h)	15	50	120	300
Total power (KW)	32	65	86	115
Exterior dimension (L*W*H)(mm)	1500*700*1200	3500*2500*2750	5800*2650*2350	7300*3050*3250
Exhaust gas treatment	UV photo-oxygen + activated carbon adsorption + initial high-efficiency filtration	Wet square cyclone tower, primary and high-efficiency filter box, UV photo-oxygen catalysis	Wet square cyclone tower, primary and high-efficiency filter box, UV photo-oxygen catalysis	Wet square cyclone tower, primary and high-efficiency filter box, UV photo-oxygen catalysis

*** The above is just for reference, Haier Biomedical has multiple products including 0.15T, 0.25T, 0.4T,0.5T,1.2T,1.5T,2.5T,3T,5T, 8T,10T and can manufacturer customized products to suit all users.**

Vehicle mounted microwave incinerator for medical waste

Product Advantages

- Suitable for the disposal of country level in remote areas
- On-site emergency response to public health emergencies
- On-premise standby equipment in hospitals
- Each unit can meet the requirements of daily processing capacity of 1T-5T

Specifications

Model	JRX-3T	JRX-5T
		
Treatment capacity (kg/h)	300	500
Total power (KW)	115	117
Exterior dimension (L*W*H)(mm)	6500*2500*2750	8300*2500*2750
Weight(kg)	10500	12500
Exhaust gas treatment	Wet square cyclone tower, primary and high-efficiency filter box, UV photo-oxygen catalysis	Wet square cyclone tower, primary, high efficiency filter box, UV photooxygen catalysis

*Haier Biomedical reserves the right to change products and specifications without prior notice.

Qingdao Haier Biomedical Co.,Ltd.

No.280 Feng Yuan Road, High-tech Zone,
Qingdao, 266109, P.R. China
Tel: +86-0532-88935593
Website: www.haiermedical.com

Haier Biomedical International | Haier Biomedical International | @haiermedicalint | Haier Biomedical International | Haier Biomedical International