



**i8-M500**  
**Medical Incinerator**

The i8-M500 is new for 2020 and boasts a wide array of features normally found on our largest machines. Developed over the last 2 years the i8-M500 offers impressive burn rates and large batch sizes while still achieving some of the lowest emissions in its class.



#### Remote Monitoring & Pro-active Analysis (optional extras)

Data can be fed back to our HQ where our team of engineers can monitor and provide advice when required on optimum operation of your incinerator.

It also allows us to advise when your service is due to ensure longevity of the unit.



#### Industry Leading Insulation

Coretex© insulation is a specially formulated substrate containing various levels of material that ensure almost all of the heat generated within our incinerators stays inside them.

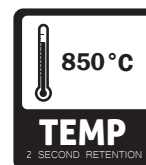
This increases performance and efficiency to another level.



#### Long Lasting Construction

All our larger incinerators are constructed from British made high quality 6mm mild steel plate.

They are fully welded for maximum strength by our time-served coded welders. Meaning you get years of trouble-free operation.



#### Designed to excel

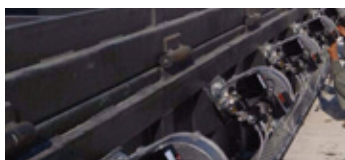
Each of our incinerators has been tested to exacting standards ensuring they meet our strict guidelines.

This machine can reach in excess of 850°C in the secondary chamber and also retains the gases for the 2 seconds required.



Designed to burn a wide range of general & household waste in larger batches. It can be fitted with an optional auto-loader and a variety of pollution control systems.

Our versatile range of medical incinerators are designed for a wide variety of waste types such as Type I-IV, pathological waste, plastics, used bandages and gauzes. This model can also use our enhanced control panel technology for remote monitoring\*.



- Cladded for heat retention, cool touch & hygiene control
- Rapid, complete and efficient medical waste disposal
- Patented safety handle for easy access to chamber
- High quality refractory lining and insulation
- Easy to use CE5 control panel
- Programmable temperature control for complete combustion
- Secondary chamber\*\* with 2 second retention time
- Fast pre-heat and continual high temperature performance
- Low energy consumption levels



\* Enhanced control panels are an optional extra and incur additional charges.

\*\* Our primary and secondary combustion chambers are constructed from superior grade steel and state-of-the-art monolithic concrete refractory with a unique concave design to prevent cold spots and maximize heat retention during the start-up and combustion processes.

When the secondary burner is activated a flame curtain is created which ensures the thermal decomposition of smoke and harmful emissions to produce a clean, odourless vapour exiting the chimney stack.



For additional information, or to speak to one of our expert team:

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# Key Parts of our Incinerator

model: i8-M500

- 1 HT Thermocouples**  
Independent control of primary and secondary temperatures via the control panel.
- 2 Primary Chamber**  
Chamber designed for maximum air flow and circulation which in turn improves efficiency and total burn time.
- 3 Operator Safety Features**  
Kill switches are position all around the machine to allow instant shut-down by operator in an emergency.
- 4 Chimney Stack**  
Stainless steel stack for longevity. Fitted with dispersion cap as standard.
- 5 Secondary Chamber**  
Retains and re-burns the exhaust gases for minimum of 2 seconds at 850°C.
- 6 'Cool Touch' Cladding**  
Hygienic, easy to clean stainless steel cladding to reduce risk of infection and increase longevity of system.
- 7 Hydraulic Door**  
All larger models now feature 'hydraulic lids' which can be easily opened safely during operation.



## How incineration works:

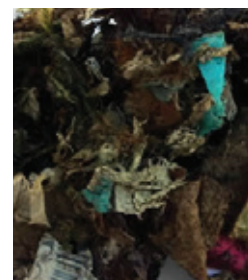
Incineration is a waste treatment process which utilizes the combustion of organic substances contained within materials to convert waste into ash, heat and flue gas. The ash residue is mostly formed by inorganic constituents of the waste which may take the form of solid lumps or powder.

Heat produced by the incineration process can be fed into a heat exchanger to produce hot water or air which can be used for cleaning or heating purposes. The remaining flue gases are passed through pollution control devices in the form of a secondary combustion chamber or additional filtration (if required) and then expelled to atmosphere.

## Applications

Our versatile range of medical incinerators are designed for a wide range of waste types. This model has one of the largest load doors and also benefits from a top loading design. Featuring the latest in operator safety and performance. This model can also use our latest control panel technology for remote monitoring.

- Industrial waste applications (Incl. RDF)
- Wood waste
- Mining/exploration/refugee camp waste
- Medical bandages, gauzes & sharps
- Pharmaceutical & pathological waste
- Oil and gas industry waste applications
- Household waste
- Oily filters & rags
- Plastics



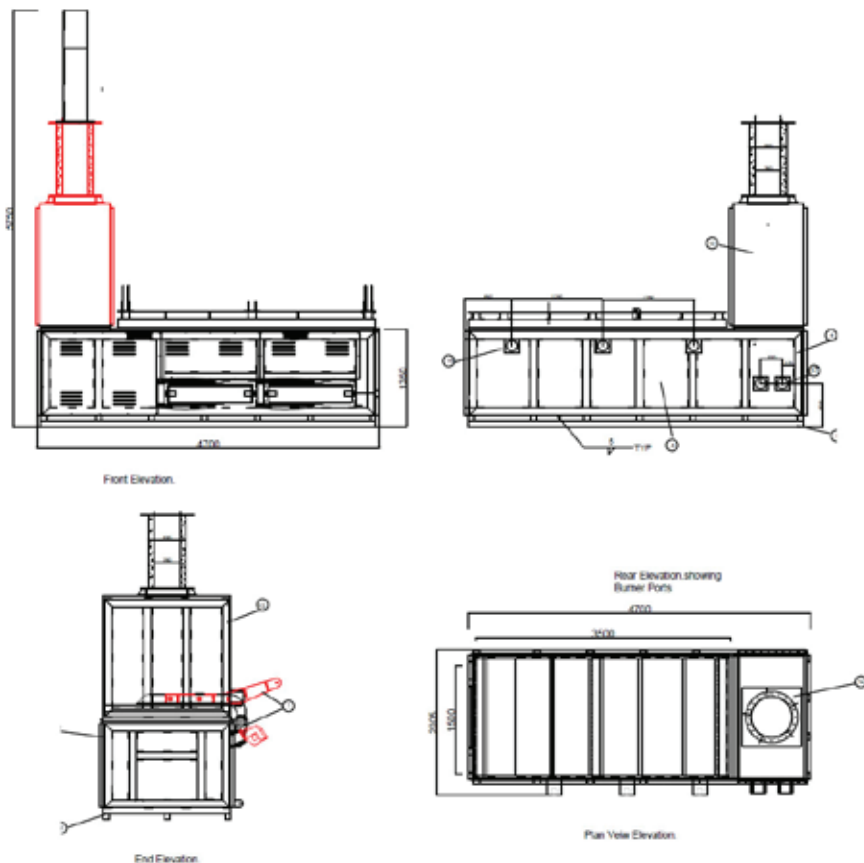
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## Average emissions / EU standards\*

\*The below figures are guidelines ONLY.

Parameter (1/2 hr av)	Limits	Measured
Total dust	30 mg/m <sup>3</sup>	12 mg/m <sup>3</sup>
Sulphur dioxide	200 mg/m <sup>3</sup>	2.4 mg/m <sup>3</sup>
Nitrogen dioxide	400 mg/m <sup>3</sup>	60 mg/m <sup>3</sup>
Carbon monoxide	100 mg/m <sup>3</sup>	78.3 mg/m <sup>3</sup>

All of our secondary combustion chambers are designed to operate at 850 - 1200°C to re-burn waste gases which prevents smoke, odours and harmful emissions. Dioxins and similar gaseous components are destroyed by a combination of homogeneous high temperatures, excess oxygen levels and sufficient gas residence time in the secondary chamber which our incinerators achieve.

Emissions are largely a product of the waste materials therefore care should be taken when selecting the most appropriate method of pollution control to ensure compliance with your local emissions standards, please discuss this with our sales team if you aren't sure.

## Incinerator Specification

Combustion Chamber Volume (m3)	5.00m <sup>3</sup>
Steel Thickness	3mm
Burn Rate**	225kg per hour
Operational Temperature	850°C
Gas Retention	2 seconds
Average Ash Residue (%)	3%
Thermostatic Device(s)	yes
Shipping Weight (kg)	13000kg
Dimensions (l, w, h)	4.70m x 1.91m x 5.75m
Door Size	3.50m x 1.50m
Fuel Consumption	30- 40 ltrs per hour
Fuel Types	Light Oil, Diesel, Kerosene, Gas, LPG



### \*\* PLEASE NOTE:

Actual burn rates & emissions will depend on a number of factors including waste type, volume of waste, moisture content, fuel used and local environmental conditions.

## Burner Specification:

This model is fitted with MAX P25 burners as standard to ensure a complete and clean burn cycle. Ecoflam products ensure high efficiency and reliable operation combined with functional features that reduce installation time and maintenance and grant a flexible boiler/burner matching.



**Ecoflam**

- MAX electrical frequency 50-60 Hz
- High efficiency fan ventilation system
- Low NOx version class 3 with yellow flame
- In compliance with current regulations
- ISO 9001 and VISION 2000 certification
- All burners are fire tested
- We reserve the right to change burner specifications without notice.

NB: picture for illustration purposes only



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- Concrete floor is preferred for installation, this should be solid and levelled.
- If you construct a new base then a reinforced concrete slab 20cm thick is recommended.
- Replace the material at a depth of at least 50cm
- Apply gravel and compact to the compressibility modulus  $M = 80.0 \text{ MN/m}^2$ .
- All fuel and electrical installations should be done according to local regulations.
- A basic shelter is required to protect the incinerator and the control panel from the weather.

## Groundwork required

**Step 1**  
Mark out area for base and reinforce with steel mesh.



**Step 2**  
Concrete and allow 24-48 hours to dry fully before installation.



**Step 3**  
Assemble incinerator shelter on concrete base once fully dried.



## Site Options



### Sheltered

Ideal weather protection for equipment and operator. Our shelters are designed for easy and quick installation on a standard reinforced concrete slab.

Certain regions require some sort of shelter from adverse weather conditions or localised problems. Our products are used in diverse locations from the freezing camps of Antarctica to sweltering temperatures of Sierra Leone.



### Containerised

Containerisation is the most feasible and viable option in contrast to the construction of on-site facilities and housing structures, eliminating the man power and costs involved.

The units arrive complete with electrical power generators and fuel tank (further customization available to suit all needs). The system is available in 10ft, 20ft, and 40ft containers, depending on optional requirements.



### Skid mounted

All larger models can be fitted to a 20ft or 40ft skid with loading/lifting hooks pre-fitted.

Using a skid allows for easier transportation of heavy components such as our larger incinerators, auto-loaders and pollution control systems.

In most cases it also reduces on-site erection and hook-up time - minimising site disruption and downtime.

**If you are considering a mobile option its worth bearing in mind that we can supply and install all the required accessories prior to dispatch - such as generators, lighting, power sockets, fuel tanks and piping. This allows rapid deployment of your mobile unit to where it is needed most.**



All containers supplied are ISO 6346 certified, so they can be used for the shipping and housing of incinerators and any other related equipment.



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## Operators PPE Kit



In most countries you are required by law to wear appropriate PPE equipment when operating machinery and/or handling hazardous or bio-hazardous waste.

Our operators kit contains a heavy duty, fire resistant apron, gauntlets and a face visor.

## Bin Tipper - Mega Dumper



The megadumper is available in a number of sizes and is our preferred method for loading industry standard waste bins into our incinerators. Fully automated, just roll the bin into position and let the megadumper do the rest.

## Customised loading options



If you have larger single items to load - for example larger animal carcasses (cows, camels, horses) we can design and build a bespoke solution\*\*\* to meet your needs.

## Fuel Tank & Piping Kit



All our incinerators come supplied with burners that have been configured for your chosen fuel type.

We supply a wide range of fuel tanks from 350 litres to 2500 litres and, quality steel braided flexible pipes to allow most kinds of installation.

## Pollution Control Systems



Pollution control systems capture all the gasses, soot and entrained solids emitted by the incinerators and processes them to meet the European regulations, which are set out in directive 2000/76/EC, dated 4th Dec 2000. Various sizes and capacities are available.

## Pre-Fabricated Shelter



We can provide pre-fabricated shelters constructed from galvanised steel. These come flat packed and require no skills to assemble within just 1 hour.

All incinerators should be on a solid concrete base.

\*\*\* bespoke solutions incur additional charges for design and engineering work, please speak to your sales agent.

## Looking after your incinerator

**Our incinerators are built to last, however unless they are protected from the elements they will not last as long.**

Here's 5 simple steps to ensure your INCINER8 incinerator lasts for many years

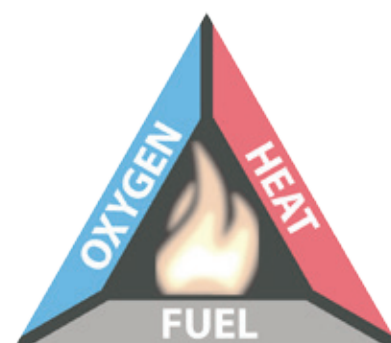
- 1). Put it in a suitable shelter.
- 2). Check for damage before each use
- 3). Service every 1000 hours\*
- 4). Do not overload the chamber
- 5). There's enough fuel for burn cycle

*\*All our products have a 1 year / 1000 hour warranty (Whichever occurs soonest).*

## Achieving optimal combustion\*\*

The basic principle of incineration is based on the combustion triangle.

For optimal combustion to occur the perfect mixture of the 3 core elements is required\*



<b>Oxygen</b>	in waste, from burners
<b>Heat</b>	from primary chamber, burners
<b>Fuel</b>	the waste being burnt

If your waste (fuel) has a high calorific value then less heat will be required to ensure good combustion. If your waste is very dense or compact, then you may need to introduce more oxygen.

Getting this balance right will ensure optimum combustion.

**\*\*Optimum combustion requires a uniform and regular flow of waste with a good calorific value. Atmospheric conditions and waste composition can effect advertised burn rates.**



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## Heat Exchanger



Get something back from your waste with our range of heat exchange modules. Inciner8 have found the optimal way to create energy from waste and make it usable whether you need it for washing, disinfection, heating, or for your specific technological process.

## Venturi Scrubber



A venturi scrubber is designed to effectively use the energy from the inlet gas stream to atomize the liquid being used to scrub the gas stream. This type of technology is a part of the group of air pollution controls collectively referred to as wet scrubbers.

## Auto Loaders



These allow continuous operation, improve fuel efficiency and can be used in conjunction with a hopper or conveyor to keep your waste processing running with little human intervention.

## Emissions Monitoring



In certain situations you will require emissions monitoring. We offer a range of options to match your needs. Our recommended solution is totally portable and gives you an instant insight into the composition of your exhaust gases.

## Annual Spare Parts Package



Your incinerator will last for years if properly looked after and maintained. The simplest way to help it last is to maintain and inspect the machine on regular intervals. Annual service packs vary from machine to machine, but typically consist of: new burners, fire rope, fireproof mastic and refractory cement.

## Additional Services



### Rewiring / Electrical Repairs

Our Engineers are fully trained to rewire any machine along with fault finding and electrical testing.



### Insulation & Refractory Repairs

Due to the design of our refractories, it is very easy to repair these on-site. IN most cases this can be done by a competent operator. However we can easily send an engineer if you do not feel comfortable doing this yourself.

We can also supply complete replacement loading doors, de-ashing door fully concreted and insulated.



### Welding, Fabrication & Repairs

Our teams of time-served fabricators can repair or modify your incinerator on-site or back at our factory.

In some regions we offer local fabrication services using local welders and engineers.



### Annual Services & Maintenance

Inciner8 are experienced in servicing and repairing most makes of incinerator.

After a successful service, you will be issued with a servicing certificate that lasts for 12 months from the date of the service.



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## CE DECLARATION.



**MACHINE LISTED BELOW HAS BEEN TESTED BY  
MANUFACTURER IN FACTORY BEFORE DISPATCH**

PRODUCTION DATE: T.B.C.  
CONFORMS TO ALL SAFETY NORMS WHEN USED ACCORDINGLY  
“CE DECLARATION OF CONFORMITY”  
“CE DECLARATION DE CONFORMITE”  
“CE DECLARACION OF CONFORMIDAD”  
“CE ATTESTATO DI CONFORMITA”  
“EG- KONFORM IT A TSERKLARUNG”

**INCINER8 LTD, UNIT 2, CANNING ROAD INDUSTRIAL ESTATE, CANNING ROAD,  
SOUTHPORT PR9 7SN, UNITED KINGDOM**

Has declared that the machinery described:  
Declares que les machines descrits:  
Declaramos que la maquinaria descrita:  
Dichiara che la macchina di seguito descrito:  
Bestatigt daB die hierunter beschreibt Maschine:  
Model (Modele; Modelo; Modello; Modell) :

## CE INCINERATOR I8-M500 C/W Eco Flam Burners

### **1.BS EN 746-2:1997**

(industrial thermo-processing equipment – part 2. Safety requirements for combustion and handling systems)

### **2.Low Voltage Directive 73/23/EEC**

Directive Basse Tension  
Directive Baja Tension  
Direttiva Sulla Bassa Tensione  
Niedrige Sappnung – Richtlinie Diretivas

### **3.EMC Compatibility Regulation 89/336/EEC**

Directive CEM  
Directiva CEM  
Direttiva Compatibilita Elettromagnetica  
Elektromanetische Vereinbarkeit – Richtlinie Directive EMC

### **4.Machinery Directive 2006/42/EC (including amendment)**

Directive Securite Machines  
Directiva Seguridad Maquinas  
Direttiva Macchine  
Maschinen – Richtlinie Directiva De Maquinario

### **5. (EC) No 1005/2009 on substances that deplete the ozone layer**





## Award Winning Team

Here at INCINER8 we see awards as great recognition for the hard work and effort we put in to every order we fulfil. We constantly remind our team that if you work hard and provide excellent customer service you will be recognised.

Over the years we have been privileged to win awards, both regionally, nationally and internationally - and long may it continue.



## British Designed & Built



## Our Suppliers & Partners



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sales@inciner8.com



**INCINER8 Ltd is one of the largest suppliers of incinerators throughout the world. Manufacturing in a factory in Southport and shipping out products all over the world through our dedicated sales team & Global Dealership Network.**

An experienced team of researchers, designers and engineers have made INCINER8 an innovator in the waste incinerator sector, achieving two Queens Awards and many regional business awards. Our hand engineered machines can process municipal, medical and animal waste streams, providing the best solutions to waste problems around the world.



## Sales / Head Office

Inciner8 International  
2 Canning Rd Industrial Estate  
Southport  
Merseyside  
PR9 7SN

**Phone:** +44 (0) 1704 884020

**Email:** [enquiries@inciner8.com](mailto:enquiries@inciner8.com)

## Dealerships

If you would like to become part of our dealership network, please get in touch:

**Phone:** +44 (0) 1704 884020

**Email:** [dealers@inciner8.com](mailto:dealers@inciner8.com)

## Technical Support

We have a wealth of information regarding our machines, waste disposal best practice and waste composition on our website.

**Phone:** +44 (0) 1704 884020

**Email:** [techsupport@inciner8.com](mailto:techsupport@inciner8.com)

