

'The most thermally efficient, robust and reliable medical incinerators on the market

Simply Built Better!



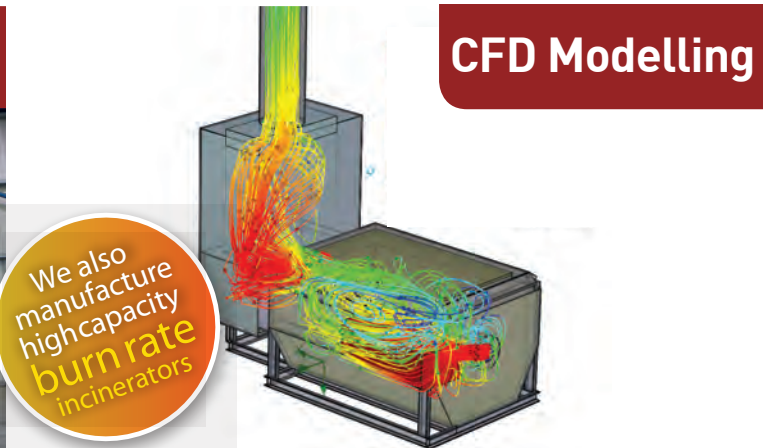
GM1300 1300Kg Waste Incinerator

Specifically designed for Medical waste

The second largest low capacity medical incinerator in our range, extremely robust with a pre-cast block abrasion /impact resistant seal to prevent damage through mechanical loading. The GM1300 is ideal for medical, clinical and pathological category 0 to 2 type waste. With an internal main chamber volume of 2.3m³, the GM1300 ensures even the largest material can be loaded fast and efficiently. Complete with an excess air systems that maintain a constant burn rate up to 50kg per hour cleanly and efficiently every time.



GM1300



CFD Modelling

We also manufacture high capacity burn rate incinerators



Touch Screen



Refractory

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addfield
 Incinerate • Cremate

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 All information should be used as a guide only, specifications are subject to change without notice.

GM1300 1300Kg Waste Incinerator

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The medical GM range is designed as a two stage incinerator unit comprising of a primary loading chamber and a secondary after burner chamber. This afterburner system draws the hot gases from the primary chamber, this ensures a clean (and compliant) burn at temperatures of 850-1150°C.

The Addfield range of incinerators are CE Certified to BS EN 746-2 :1997, a recent emissions testing concluded the following results based on two second residue time within the secondary chamber, results are well below the EC limits.

Expected Emissions*	% by Volume
Carbon Dioxide (CO2)	5%
Water (H2O)	29%
Oxygen (O2)	6%
Sulphur Dioxide (SO2)	6%
Nitrogen (N2)	54%
Smoke	0%
(Not detectable under standard operating conditions)	
Odour	0%
(Not detectable under standard operating conditions)	
Volume of ash	1-3%
(Dependent on waste stream)	

*These emissions are based on minimum waste calorific values of 6kcal/g (blood) 45.7MJ/kg (human organs), 70-100% moisture contents. With no other waste streams present other than general packaging containers that do not make up more than 1.5% of the total load weight.

Composition of fuel being used:

Fuel Input	Diesel	Composition %
Carbon	C	86%
Hydrogen	H1	13.2%
Nitrogen	N2	0.70%
Oxygen	O2	0.00%

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Machine Specifications: GM1300

External Length (mm)	3800
External Width (mm)	3065
External Height/Less Flue(mm)	3702/2102
Primary Chamber Sizes:	
Internal Length (mm)	2350
Internal Width (mm)	1130
Internal Height (mm)	1000
Chamber Volume (m ³)	2.3
Weight (Approx. Tonnes)	5
CE Certified	YES
EU Regulations Compliant	YES
Max Load Capacity† (kg)	1300
Nominal Burn Rate UK*(kg/hr)	< 50
Burn Rate [Export Only]* (kg/hr)	50-75
Thermal Capacity (kw/hr)	190
Power Supply 50/60hz	210/230v
Fuel Options:	
Diesel	Yes
LPG	Yes
N-Gas	Yes

† Based on general municipal waste streams

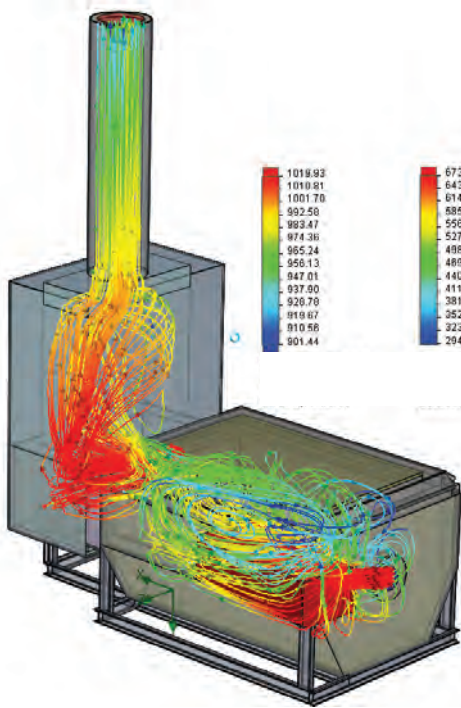
* Depending on the type waste stream being loaded and excludes heat up time.

We reserve the right to change the specification, dimensions and quality of materials from time to time, so long as the alteration is minor or an improvement to the said products.

Robust, Reliable...
...and Efficient

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Computational Fluid Dynamically Modelled Incinerators

Key Features:

We have CFD modelled all of our incinerators by utilising some of the most advanced software available. By using Computational Fluid Dynamics software it helps us to predict gas velocities /movements within the chambers along with external surface temperatures whatever the external ambient parameters maybe.

We also use this information to develop a more durable, robust and efficient incinerator by:

- Identifying heat build-up and stress points within the structure.
- Reducing thermal heat loss by increasing insulation systems.
- Designing out hot & cold spots to ensure complete combustion within the chamber.

General Construction

Robust, Reliable and Efficient

- Pre-fabricated 8 & 10mm robust mild steel casing, seam welded & suitably stiffened/ braced where necessary.
- Paint finishing - The steel structures are completely painted using a two pack high grade paint system that is baked onto the steel structure at 70°C for 10hrs. The standard colour of the series is cherry for the primary and secondary chambers, lid, flue and counter balance.
- Three layers of refractory lining in the primary & secondary chambers totalling thickness of 180mm, rated at 1750°C, provide increased fuel efficiency.
- Lightweight resilient refractory fibre insulation lid, providing a tight seal & gives excellent thermal efficiency.
- Removable roof and back plate for ease of maintenance.
- All combustion fuel pipe work and electrical systems are weather proof and in accordance with BS7671-17.
- Excess air and rapid cooling systems fitted as standard, aiding cleaner burns and faster cool down times.

Primary Chamber

- Fully insulated internal refractory lining, constructed from high grade refractory brick ensuring a self-supporting interlocked arrangement.
- High alumina content refractory bricks, hold heat for longer.
- One manually operated, access lid.
- Two waste ignition burner, temperature controlled on-off, complete with internal air fans.
- A pre-cast block impact zone, that protects the refractory lining when loading.

Secondary Chamber

- Fully insulated internal refractory lining, constructed from high grade low thermal mass insulation.
- One secondary chamber burnout burner, temperature controlled on-off, complete with internal air fans
- Integrated combustion burner air fans with automatically controlled distribution to their designated area.
- One temperature sensor mounting point at the top of the chamber ensuring the chamber reaches the necessary 850°C/1100°C minimum.

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Addfield Programmable Logic Controller

Key Features:

- Plug and play design for easy & efficient replacement.
- Touch screen interface.
- Data logging.
- Incoming and outgoing cable terminations.
- Burner time control during cycles.
- Temperature feedback and control during cycles.
- Interface relays and contactors.
- Emergency stop feature.
- Security lock out.
- Cycle status indicators.
- Fault status indicators.
- Integrated excess air controller.
- Operator interface.



Waste Loading and De-Ashing

The medical GM series of incinerators are designed for top loading only through the main access door.

Due to the type of wastes they incinerate, bio-security measures should be in place on the site of the incinerator due to the possibility of spillage and spread of disease. At the end of every incineration process ash should be discharged through the loading door onto the supplied catcher tray prior to being loaded for the next burn.

Waste types to be used in the Addfield GM1300 Incinerator

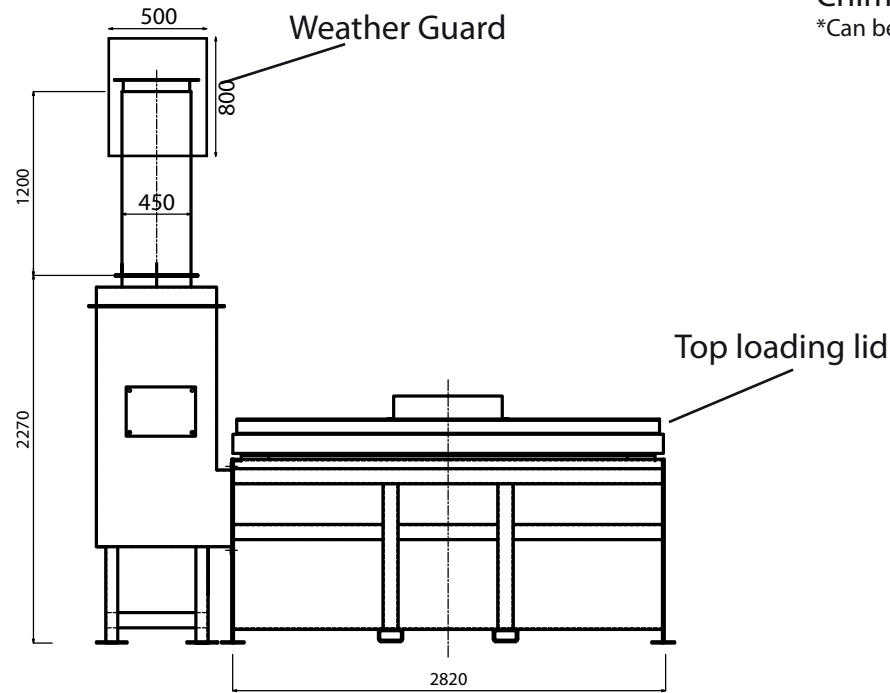
- 0-50% Moisture
- Faeces/blood stained materials
- Cancer Treatment Wastes
- Surgery Waste
- Syringes/ Needles
- Mattresses

Combustion System

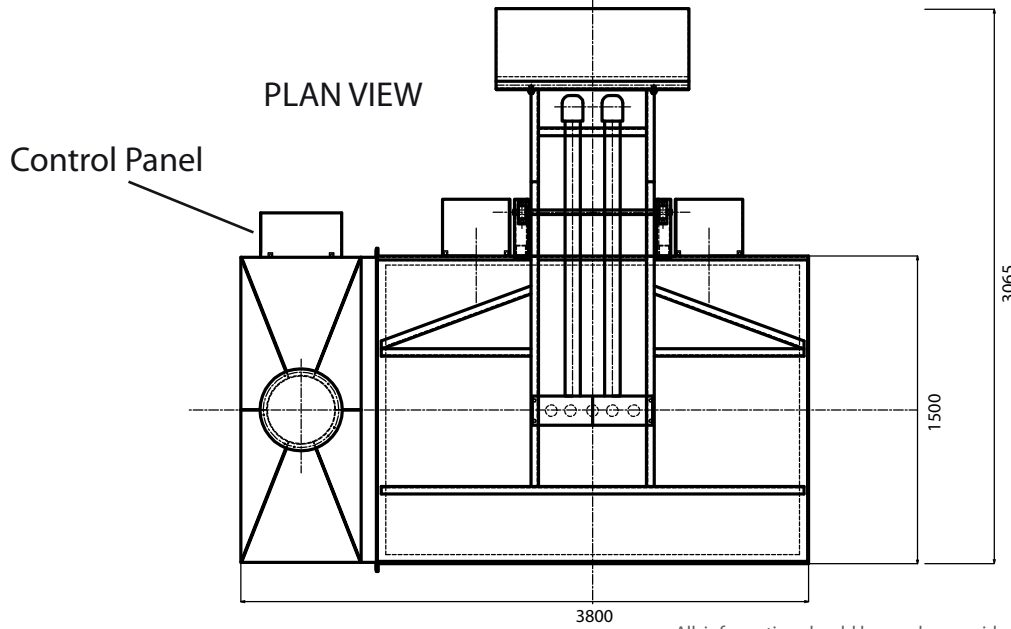
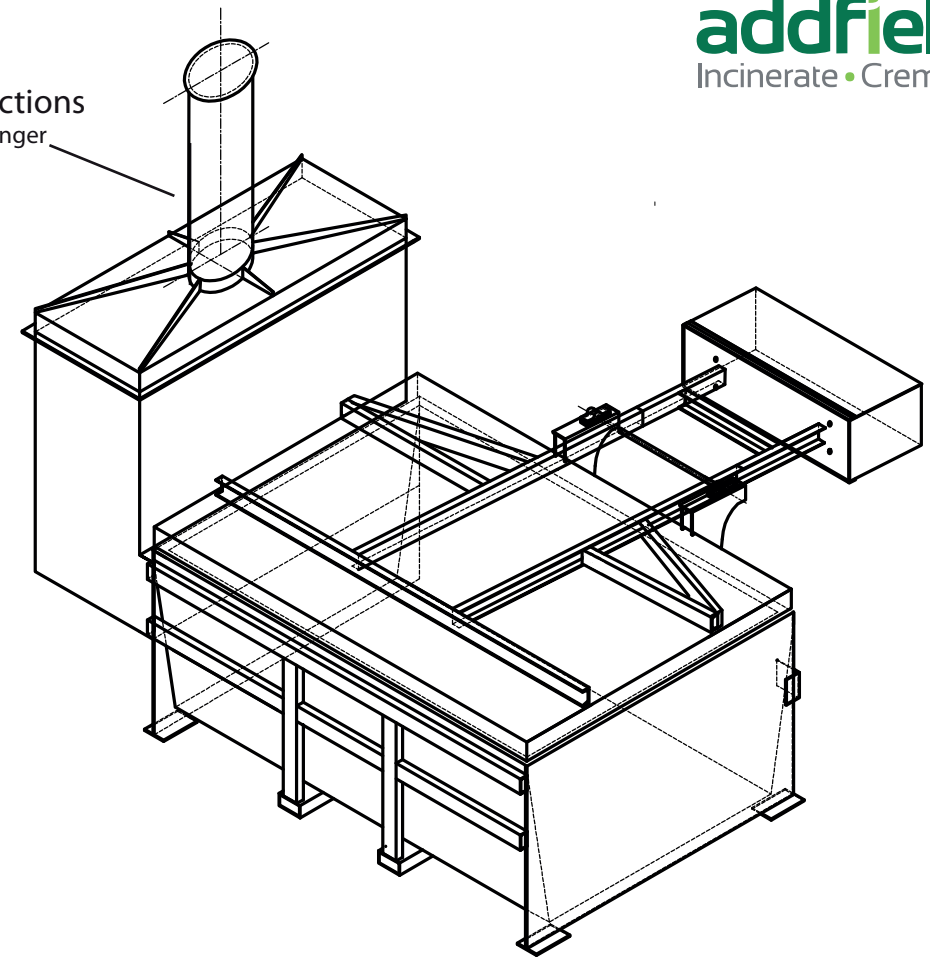
The burner system comprises of fully automatic package burners, these burners come complete with the following features:

- Flame failure controls
- Adjustable flame patterns
- Integral fuel pump
- Solenoid valves
- Integral continuous air fan
- Fuel sensors

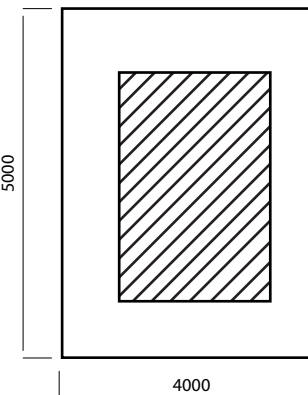
GM1300 Incinerator



Chimney Sections
*Can be made longer



FLOOR PLAN
150mm concrete base



rev.	description	date
	addfield Addfield Environmental Systems Ltd Unit 9, Zone 4, Burntwood Business Park, Staffordshire, WS7 3XD www.addfield.com	
	title GENERAL ARRANGEMENT OF GM1300 INCINERATOR	
	scale:- Not to scale	
drawn:-	RLC	date:-
drg. no.	GM1300	rev.