

'The most thermally efficient, robust and reliable animal incinerators on the market  
Simply Built Better!'

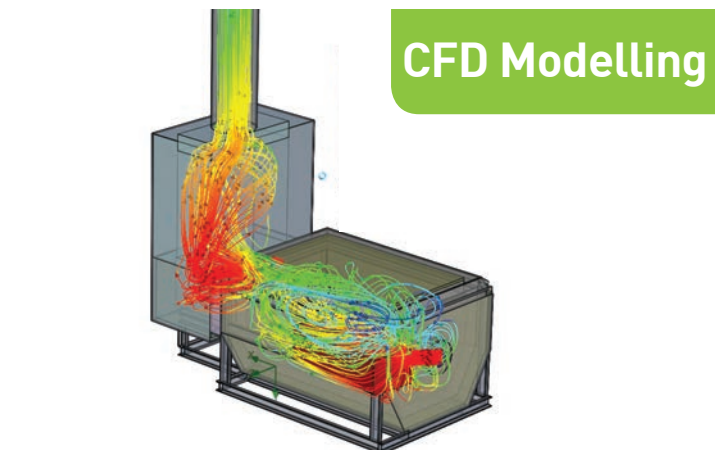


# SB-AB Robust, Reliable, Efficient Dual Loading Pet Cremator

One of our larger low capacity machines, extremely robust and efficient featuring a 10mm thick steel periphery. Complete with a pre-cast block abrasion/impact resistant seal that protects the refractory from mechanical loading. The SB-AB pet cremation unit has a dual loading design, either via the top loading lid - ideal for larger animals or by using one of the two side loading doors. The machine has a main chamber volume of 0.93m<sup>3</sup> and is capable of a constant burn rate up to 50kg per hour cleanly and efficiently every time. DEFRA and DARD approved.



SB-AB



CFD Modelling



Touch Screen



Refractory

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Incinerate • Cremate

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

# SB-AB Robust, Reliable, Efficient Dual Loading Pet Cremator

The pet cremation range is designed as a two stage crematory 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 cremators 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)	7.4%
Water (H2O)	22%
Oxygen (O2)	6%
Nitrogen (N2)	64.5%
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 45.7MJ/kg (animal carcase). 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	H <sub>1</sub>	13.2%
Nitrogen	N <sub>2</sub>	0.70%
Oxygen	O <sub>2</sub>	0.00%

## Machine Specifications: SB-AB

External Length (mm)	3120
External Width (mm)	1820
External Height/Less Flue(mm)	3860/2165

## Primary Chamber Sizes:

Internal Length (mm)	1640
Internal Width (mm)	806
Internal Height (mm)	700

Chamber Volume (m <sup>3</sup> )	0.93
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Weight (Approx. Tonnes)	3.6
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CE Certified	YES
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EU Regulations Compliant	YES
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Nominal Burn Rate UK*(kg/hr)	< 50
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Burn Rate [Export Only]*(kg/hr)	50-75
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Thermal Capacity (kw/hr)	190
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Power Supply 50/60hz	210/230v
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## Fuel Options:

Diesel	Yes
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LPG	Yes
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N-Gas	Yes
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† 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

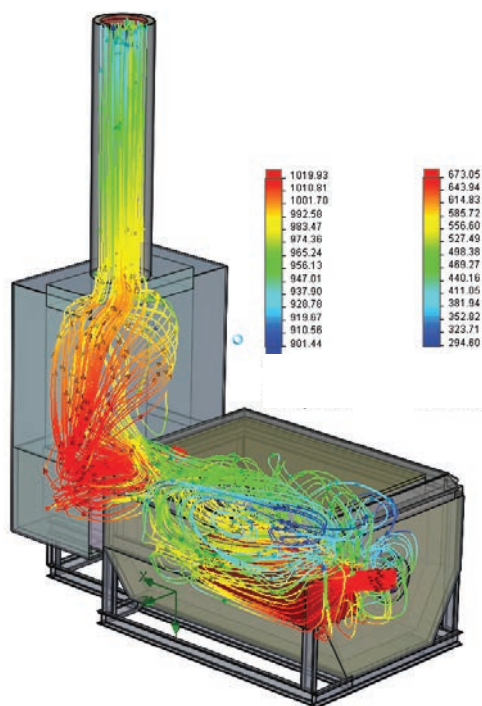
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## Computational Fluid Dynamically Modelled Incinerators

### 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 green 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 1260°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.
- As an optional extra, an excess air and rapid cooling systems can be fitted, aiding cleaner burns and faster cool down times.

## Primary Chamber(s)

- Fully insulated internal refractory lining, constructed from high grade refractory brick ensuring a self-supporting interlocked arrangement.
- One manually operated, access lid
- Two manually operated, front access doors
- 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 minimum.

# SB-AB Robust, Reliable, Efficient Dual Loading Pet Cremator



## 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.
- Independence chamber selection

### Waste Loading and De-Ashing

The SB-AB series of cremators are designed with a dual loading options.

#### Side Loading:

Equipped with two side loading doors, each chamber can be used independently as a partitioning wall separates the two spaces. Side loading is ideal for smaller animals. Animals can be placed in specially designed trays to simplify ash removal and ensure ash segregation. An important safety features is the door cut-off switches that immediately turn off the burners when these doors are opened.

#### Top Loading:

Allows for easy access of larger domestic pets. removing the dividing wall allows for a larger cremation chamber. The SBAB offers flexibility to your pet cremation business.

At the end of every incineration process it is recommended the ash should be removed prior to the next incineration cycle.



### 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

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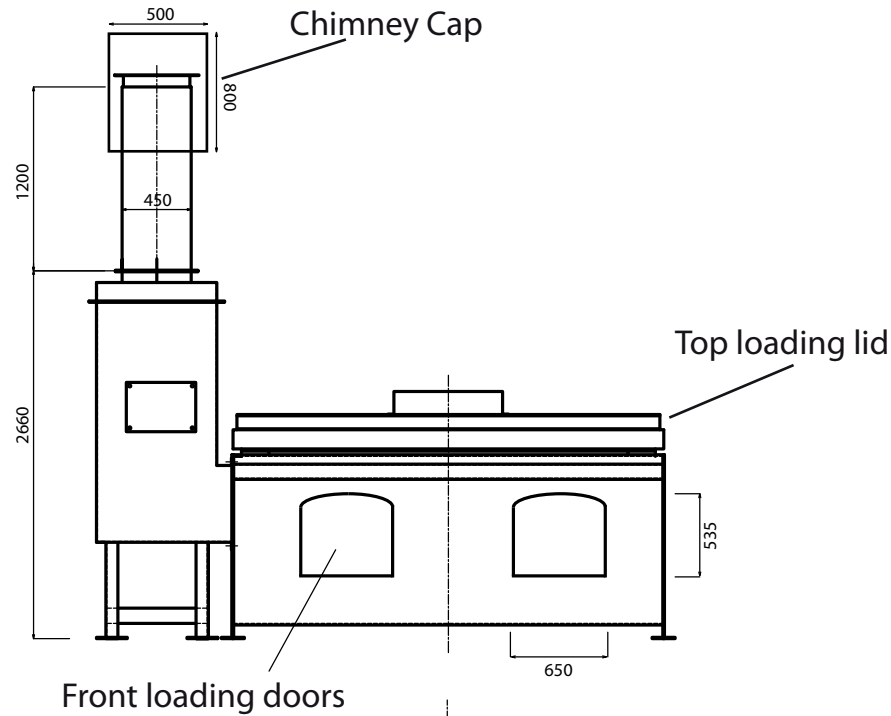
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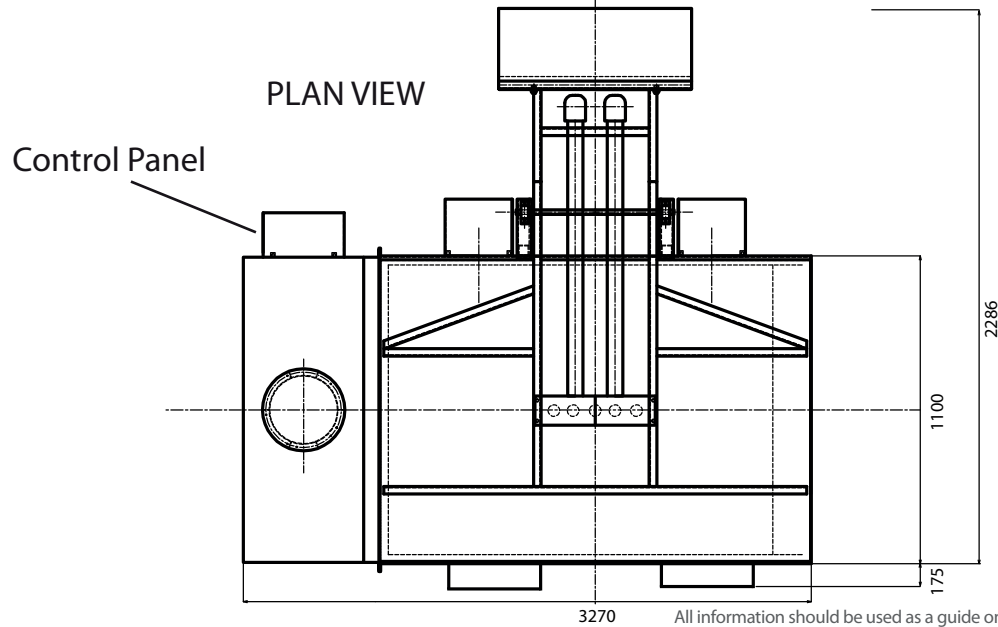
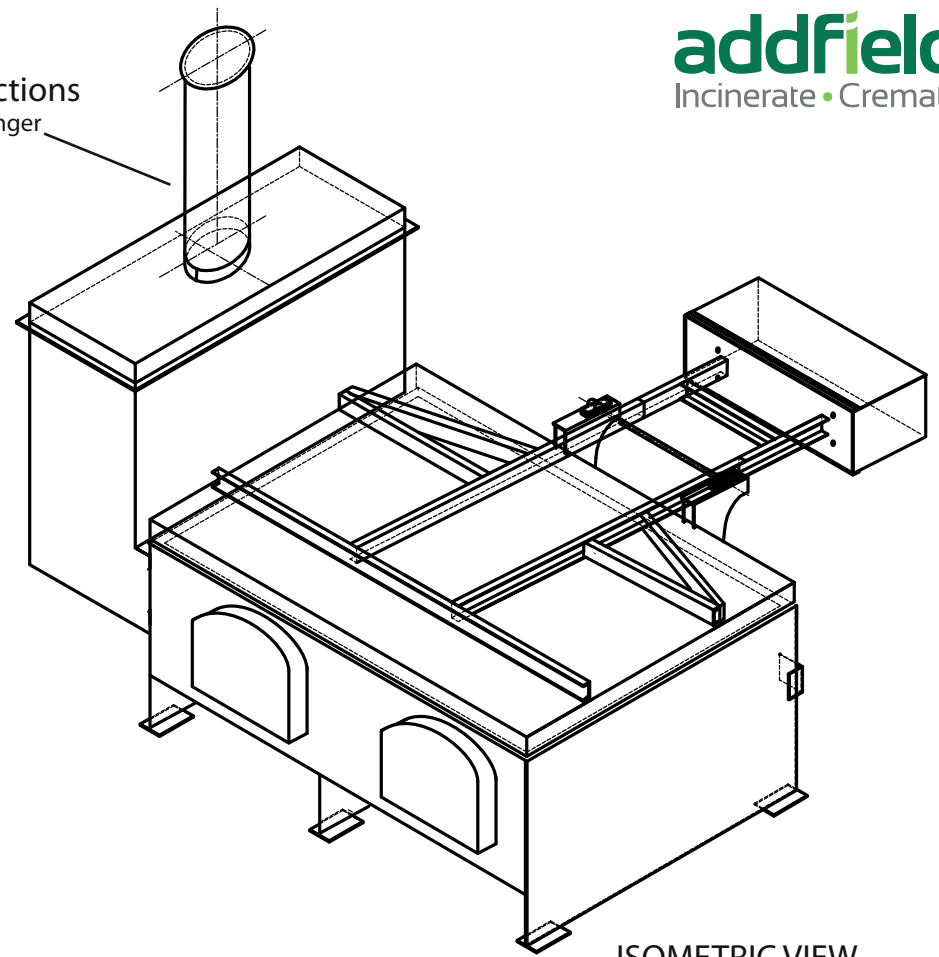
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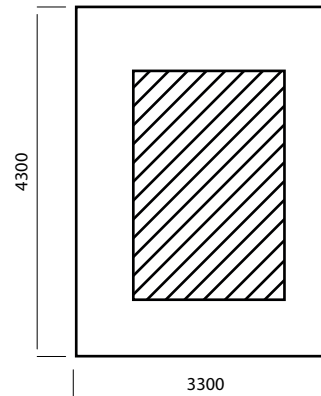
# SB-AB Cremator



Chimney Sections  
\*Can be made longer



FLOOR PLAN  
150mm concrete base



rev.	description	date
<b>addfield</b>		
Addfield Environmental Systems Ltd Unit 9, Zone 4, Burntwood Business Park, Staffordshire, WST 3XD		
<a href="http://www.addfield.com">www.addfield.com</a>		
title GENERAL ARRANGEMENT OF SB-AB PET CREMATOR		
scale:- Not to scale		
drawn:-	RLC	date:-
drg. no.	SB-AB	rev.