

## Aquaculture



# THUNDER 500

Mid-sized Aquacultural incinerator, ideal solution for high moisture fish farm and marine waste, maintain biosecurity.



Maintain your biosecurity through securely destroying a complete range of aquacultural and fish Farm waste. Designed and built along the latest advances in marine incineration. Having a multi layered brick based refractory achieving a 40% reduction in fuel consumption compared to alternative solutions.

Top loading with reinforced concrete for hard wearing easy operation. DEFRA approved and compliant with EU Animal By Products Regulations. 500kg loading capacity. Not all incinerators are suitable for aquacultural waste, which is why our machines have been optimised to effectively handle your waste requirements completely.

## Machine Specification

External L x W x H (mm)	2549 x 1540 x 2495/3695
Internal L x W x H (mm)	1843 x 800 x 800
Chamber Volume (m <sup>3</sup> )	0.76
Weight (approx tonnes)	3.85
Max Load Capacity (kg)	500
Nominal Burn Rate UK* (kg/hr)	<50
Burn Rate [Export Only]* (kg/hr)	50 - 75
Thermal Capacity (kW)	240
Power Supply 50/60 hz	210/230v
Door Aperture	1843 x 800
Control Panel	AI or PLC
Fuel Types	Diesel, LPG, N-Gas
Insulation Board	25mm Super-wool
Insulation Fire Brick	Grade E23
Fire Brick (Alumina)	42.5%

\*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 product.

## Primary Chamber

- Pre-cast block impact zone protecting refractory lining during loading.
- Heavily insulated internal brick refractory, constructed along an interlocking systems to ensure maximum strength and resilience.
- Premium grade high alumina content refractory brick work delivering optimal thermal retention.
- Top loading counter balanced insulated access lid.
- Temperature controlled waste ignition burner automatic on-off, complete with internal air fans.

## Secondary Chamber

- Fully insulated internal refractory lining. Constructed from high grade low thermal mass insulation.
- Temperature controlled Secondary chamber burnout burner with automatic on-off control, complete with internal air fans.
- Integrated combustion burner air fans automatically controlling distribution to designated areas.
- Temperature sensor mounting point at the top of the chamber, ensuring the chamber reaches the required 1100°C minimum.

## Recommended Waste Types



Fish Farms



Fish Wholesalers



General Fish Waste



## Aquaculture

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## Waste Loading and De-Ashing

The aquacultural range of incinerators are designed for top loading directly into the primary chamber. Loading can be manual or mechanically through digger or hydraulic bin tipper. To be loaded no more than once per day prior to operation. The incineration process will reduce the waste to approximately 3% volume, ash. The ash should be removed before the following waste is loaded to ensure optimum burn rates. Optimised for high moisture waste Optional de-ashing doors are available.

## The Addfield Difference

- Pre-Fabricated 8mm & 10mm robust mild steel casing, seam welded and suitably stiffened/ braced where necessary.
- Optimised loading chamber for maximum operational capacity.
- Lightweight resilient refractory fibre insulated lid, providing a tight seal, giving excellent thermal efficiency.
- Counterweighted loading chamber lid for ease of use.
- Primary and secondary chamber lining thickness 220mm rated at 1650°C.
- Premium paint finish - Steel structures are painted using a two pack high grade paint system.
- Multi-layered refractory lining using fire bricks and insulation bricks, improving thermal efficiency.



## Additional Operation Equipment



### Bin Tipper

The Bin Tipper unit empties waste within the bin using a unique electro-hydraulic mechanism that can lift and tip more than 150kg. Hands free loading ensures operators safety, when dealing with hazardous waste.



### Fuel Tank

Allowing you to operate the incinerator in all locations as well as providing a backup to your traditional supply. Available in 1000 to 5000 litre capacity. Fuel can be safely stored and monitored in close proximity to your incinerator.



### Control Panel

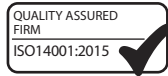
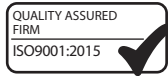
Specially designed control panels, to manage your incineration. Pre-programmed and able to be manually adjusted for optimal results. Push button and touch screen control with optional data logging system.

## Controller



# Addfield Intelligent Controller

Simple to operate adaptive control system for achieving optimal results from your machine.



## Controller Features

The Addfield Intelligent Controller has been developed to provide you with a simple yet effective operational process. Designed around a touch screen HMI interface, and independent burner control switches.

The touch screen interface provides all of your essential operations at the press of a finger. Having pre-loaded programmes optimised for your individual requirements, waste type and operating regime.

Giving you instant access to live temperature readings for the primary and secondary chambers and remaining burn time to enable you to manage your incineration process more efficiently.

Simple to install with a plug and play interface which enables straight forward installation and maintenance.

Built in data-logging to automatically records you usage, timings and temperatures achieved. Archives all essential which is able to be exported to Excel through the removable USB drive.



## Key Features

- Plug and play design
- Zone ramp sequence multi zone controller.
- Incoming and outgoing cable terminations.
- Burner control gear.
- Interface relays and contractors.
- Temperature indication and control of the primary chamber.
- Temperature indication and control of the secondary chamber.
- Plant status indicators.
- Cycle status indicators.
- Fault status indicators.
- Operator interface.
- Data-logging
- USB Port.

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