

# ADVANCED SOLUTIONS FOR HUMAN CREMATION

# LEADING THE WAY FOR SUSTAINABLE CREMATION

Since 1982 Addfield has been consistently innovating cremation technologies for a cleaner future.

## Who is Addfield Cremations

We are the latest expansion in the Addfield group specialising in manufacturing the most reliable and sustainable thermal treatment solutions available.

Part of Addfield Projects Ltd, established in 2021 to address the increase in hazardous waste disposal and waste to energy needs. The first Addfield machine was built in 1982 and just over 40 years later we are bringing our internationally recognised approach to incineration and cremation to the human cremation market.

Benefitting from years of solving some of the most complex incineration problems we have brought our unique perspective to alternative technologies to develop a number of options to better serve crematoriums and the greater industry at large. Our shared mission is simple, "Prioritise protecting the environment and satisfying the customer at every step". Our experiences in more than 150 countries has taught us that sustainability is no longer a luxury but an essential focus for a healthier planet. To achieve this, we have worked closely with UK crematoriums to develop facilities that harness the latest electric and hybrid technologies to start making a difference today, for a long-term impact for generations to come. Where traditional fossil fuels are used our emphasis on efficiency dramatically reduces the impact of every cremation day.

We pride ourselves on continuous research and development, working alongside new and existing customers finding improved ways not only with the environment in mind, but also the crematorium management, ease of operation and reducing maintenance downtime.

Taking a journey with our clients, offering tailored designs, project management, and ongoing after-sales support. It is our commitment to partnership that allows us to offer the highest standard of service and support built upon years of recognised quality.

> Harjot Bhullar. Operations Director, Addfield Cremations





# THE ELECTRIFICATION JOURNEY BEGINS

#### 1982-2021

From humble beginnings in the UK we always put efficiency and reliability at the forefront of every machine built.

Growing our range and reach, expanding from a niche UK business to a world leader. Welcoming many of the leading figures in thermal treatment into Addfield with the purpose of producing only best.

#### 2025

The 'alva' all electric Human Cremator is completed and unveiled to the world.

Completion of early testing, along simulated operation provides excellent results, delivering impressively faster cremation times compared to alternate electric cremators already on the market, ready for installation in Q3.

#### 2024

The first model is prepared in both the virtual world incorporating Computational Fluid Dynamic modelling, optimising air flow, temperature control and emissions.

Alongside a hand crafted full sized prototype, rigorously tested along real world simulations above and beyond its design parameters to create a truly robust, reliable and efficient cremator.

### 2022

We were invited to bring our 40 years of experience in thermal treatment to address the future sustainability of Human Cremation.

Taking our first steps of transforming the vision of an accessible all electric cremator into a fully formed concept began.

#### 2023

The first blueprints are drawn up following hundreds of hours of interrogating operational data from existing sites.

Investigating every aspect of the cremation technologies in use to develop a solution that goes above and beyond what is currently available.

# THE ADDFIELD ALVA

CREMATOR USER: OPERATOR			BURNING CYCLE		dfield ations
PRIMARY CHAMBER   elements   ON   MODE   POWER   T1.8 %     SECONDARY CHAMBER   POWER   ON   MODE   POWER   23.9 %     COMBUSTION FAN   MODE   SPEED   23.5 %   FAN   SPEED DEC	PCC TEMP 157.6 °		5		SCC TEMP
OVERVIEW FAULT CONTROL SETPOINTS	MANUAL CONTROL	ACCESS LEVELS	I/O DATA INPUTS	I/O DATA OUTPUTS	DATA RECORDING

1. PRIMARY CHAMBER	The main cremation chamber into which the coffin is loaded, and the process takes place.
2. SECONDARY CHAMBER	Designed to oxidise affluent combustion gases from the cremation process, and by an O <sup>2</sup> sensor to achieve good combustion.
3. PRIMARY ELEMENTS	Silicone carbide elements provide heat directly into the retorts, the primary combustion chamber. Furthermore, a set of under hearth (hot hearth) elements ensures 360° heat penetration.
4. DE-ASH CHUTE	De-ashing chute, typically positioned at the rear of the machine for safe and effective ash removal .
5. SECONDARY ELEMENTS	Secondary chamber elements provide heat to meet the regulatory temperature requirements.
6. ElectraFlam™	A unique system, designed to replicate the characteristics of a fossil- fired burner by providing highly turbulent, superheated air. Injected at very specific areas of a cadaver that requires additional energy for cremation.
7. CERAMIC BAFFLES	Designed to increase the hot surface to gas ratio in the secondary chamber, increasing turbulence and maximise retention time.

8 HOUR PRE-HEAT WITH 2 HOUR PRE-HEAT NEXT MORNING EFFICIENT <120 MINUTES CREMATION PROCESS AIR-FLOW HEATER SIMULATES TRADITIONAL BURNER OPERATION



### UNABATED

- **1. COFFIN LOADER**
- **2. AUTOMATIC CHARGE DOOR**

3. PRIMARY CREMATION CHAMBER

4. SECONDARY COMBUSTION CHAMBER

### ABATED

**5. EMERGENCY BY-PASS VALVE** 

6. WASTE HEAT RECOVERY BOILER

7. SORBENT INJECTION (SODIUM BI-CARB AND ACTIVATED CARBON PRE-MIX)

**8. FILTER TOWER** 

9. INDUCED DRAUGHT FAN

**10. EXIT TO CHIMNEY** 

OPTIMAL REFRACTORY DESIGN FOR EASE OF MAINTENANCE INTERNATIONALLY ESTABLISHED NETWORK OF SKILLED ENGINEERS REPRESENTING THE BEST OF BRITISH MANUFACTURING

# SERVICING AND MAINTENANCE

### All Inclusive Service Contracts

Through regular preventative maintenance our team can help you maintain maximum operational uptime, whilst also reducing the risks of costly repairs.

Our range of service packages are available at levels and timelines to suit your requirements.

Delivering remote monitoring, emergency callouts, including replacement/spare parts, and consumables as required.

Our international team of service engineers based in the UK bring in excess of 40 years experience of building, maintaining and servicing cremators for some of the biggest names in the industry.

Combined with our central manufacturing hub gives us unprecedented access to spares and accessories exactly when you need them.



# YOUR MACHINE YOUR FUEL CHOICE

Fuel Type	Electric	Hybrid	Fossil Fuel
Approx. CO <sub>2</sub> reduction per cremation	-39.28kg	-17.18kg	-0Kg

# MANUAL COFFIN CHARGER



## MOTORISED COFFIN CHARGER



Constructed in 1.5" square steel tube 12,14 and 16 gauge. Hyrdaulic hand pump - double acting. CE Safety Certified and Anti-Bacterial finish. These models are principally designed for charging into the cremator. Manual pump operated as standard overhang of 690mm.

- Length -2692mm
- Width 710mm
- Closed height 400mm
- Fully extended 1727mm
- Lift 1327mm
- Weight 110kgs
- Lift Capacity 285kgs

As an optional extra the trolley can be supplied as an electrohydraulic unit and with an extended overhang.

The power drive system offers a unique design that allows for 360-degree turning at the touch of a button, making navigation in tight spaces easier. The drive wheel handle grips are designed for effortless movement, catering to operators of smaller stature. The hydraulic system has been redesigned to ensure complete control regardless of weight, with a safe working load of 63 stone. The top bed features dual powered rollers for added safety and stability, ensuring that trays or coffins are securely held in place during transportation.

- 5-tier with 150mm wheel fitted:
- Length: 2470mm
- Width: 685/735mm
- Closed height: 260mm
- Fully extended: 1960mm
- Lift: 1700mm

# ADDFIELD CREMATIONS YOUR TRUSTED PARTNER



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