



FIRESTREAM HOSPITAL WASTE INCINERATOR

WITH
INTEGRATED FLUE-GAS WASHER





Free standing unit requires a flat surface. Modular package type with Primary and Secondary chambers, designed to give a residence time of 2 seconds up to 1000 to 1200°C. Based on Pyrolytec Combustion Principle.

CONSTRUCTION

Combined Primary & Secondary chamber casing is rectangular, constructed from 6mm mild steel plate braced & stiffened externally, with 10mm mild steel front plate, all welded to a mild steel box base frame.

Internally, the casing forming primary and secondary chambers are lined with high-quality castable refractory and fire-bricks suitable for temperatures up to 1400°C, backed by thermal insulation to give a combined thickness of 225mm. Outer surface temperature 50 to 55°C.

Hinged mild steel refractory lined insulated feed and ashing doors are fitted to the front plate, they have rim seals and quick release clamps. When both doors are open, full access is provided for ashing out. A viewing port of heat resistant glass with hinged protection flap is fitted.

BURNERS

The primary chamber is fitted with one temperature/timer controlled ignition burner. Temperature Range 700 to 800°C.

The secondary chamber is fitted with a set of two temperature controlled burners which fire automatically when the chamber temperature is below 1050°C.

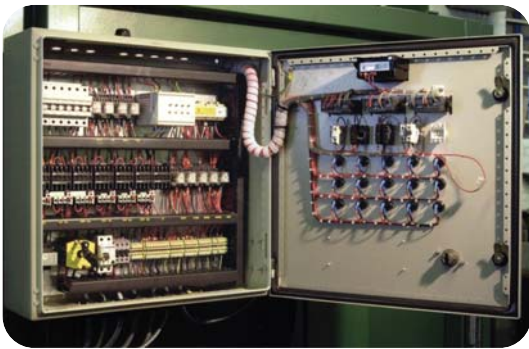
Burners are Natural Gas Fired and LPG packaged type and include an AC electric motor, Control Box, Flame Failure Device, Direct Drive Fan, Air Regulation Damper, Ignition Transformer, Ignition Electrode and Combustion Head. Electrically they are connected via a multi-plug for quick and easy maintenance.



CONTROL PANEL

The control panel has a hinged door and is sealed to IP64 standard. It houses the primary and secondary temperature controllers, motor starters or relays for fans, burners, fuses and connection terminal.

Mounted on the panel door are panel door isolator, primary and secondary chamber temperature indicators, feed timer, motor running lights, burner firing and lockout lights, feed available light and shut-down switch. Operators interface push-buttons and switches.



AIR SUPPLY

Air for the primary and secondary chamber is provided by direct drive centrifugal fans.

Primary air is injected at low level into the base of the firebed through jets located along each side of the chamber. Removable caps gives access to the jets so that they can be easily cleared or any obstruction by manually rodding through.

Secondary chamber air is injected through one or more inlets.

INTEGRATED FLUE-GAS WASHER

Gases from the secondary chamber pass through the Integrated gas washer system. Gases are drenched via gas washer sprays and pass through a filter removing particulate from the gas stream. The gas washer is of mild-steel construction and incorporates a re-circulating system and cooling tower for efficient use of water (maximum water consumption is 15 litres per hour). Particles collected from the system are deposited into the water trough for manual removal with tools provided.

CHIMNEY

Designed to BS 4076 standard; Circular mild steel aluminium-clad self supporting chimney reaching to a height from 15 meters or more from the ground level when mounted off top of the unit. Internally it is lined with castable insulation and externally the shell is painted with two coats of heat-resistant paint. Made in flanged sections and bolted together at site. Port for taking sample of flue-gases.

OPTIONS

WATER TREATMENT SYSTEM

To ensure clean water is dispersed to drain/sewage line. Gas washer is fitted with a water treatment system. The water is dosed with a water treatment solution introduced via water treatment reagent pump, a further settlement tank and filters are provided. All constructed from stainless steel. Panel mounted pH monitor with automatic temperature compensation controls the water treatment solution flow.

AUTOMATIC RAM LOADER

The ram loader comprises of a waste reception hopper with pneumatically operated parts, hinged top lid, ram pusher plate and vertical live feed door.

Pneumatic loaders are complete with air compressor, air receiver, pressure regulator, air filter unit, air cylinders, pressure gauges, flow regulator and control valves.

VACUUM ASH UNIT

Fine ash is picked up from the hearth by a vacuum suction line and conveyed to a collection bin.

The vacuum power is provided by a portable multi-stage turbo exhauster with TEFC motor; it has rubber tyre wheel, filter and container for interception of any fines carries over from the collection bin.



MODELS AVAILABLE

From 50Kg/Hour to 400Kg/Hour burning capacity of Medical/Hospital Waste.

Natural Gas/LPG or Diesel Fired Incinerators.

Containerised Incinerators for Mobility.

OVER
10,000
 INCINERATORS
 SUPPLIED, INSTALLED & SERVICED
 WORLD-WIDE

EMISSIONS TO ATMOSPHERE*

Particulate	30 mg/Nm ³
CO	100 mg/Nm ³
Sulphur Oxides (SO _x)	200 mg/Nm ³
HCL	30 mg/Nm ³
Nitrogen Oxides (NO _x)	300 mg/Nm ³
Dioxins and Furanes	0.1mg/Nm ³
Electrical Requirements:	220/240V Single Phase 50/60Hz AC

Smoke does not exceed No. 1 Ringelmann Scale.

Emission levels are in line with the British and EPA standards.

* Emission levels printed herein may vary according to the composition of waste, weather conditions, atmospheric pressure, altitude, etc.



Established: 1922

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NATURAL GAS FIRED FIRESTREAM INCINERATOR WITH BUILT-IN GAS WASHER

TECHNICAL DATA SHEET

	FS100-2SGW	FS200-2SGW
Primary Chamber Volume	2.1m ³	4.8m ³
Burning Capacity	100 Kg/hour	200 Kg/hour
Type of Waste	Hospital/Medical	
Average Density of Waste	70 to 90 Kg/m ³	
Calorific Value of Waste	4000 Kcal/Kg	
Primary Combustion Temperature	700 to 800°C	
Secondary Combustion Temperature	1000 to 1250°C	
Residence Time	2.0 Seconds	
Refractory/Lining Thickness	225mm	
Refractory Withstand Temperature	1400°C	
Combustion/Burning Principle Type	Pyrolytic	
Number of Burners	3 (One in Primary Chamber and Two in Secondary Chamber)	
Chimney Height	From 15 meters from ground level when mounted off top of the incinerator	
Chimney Construction	Designed to BS4076 standard; Internally lined with castable insulation	
Outside Surface Temperature	50 to 55°C	

NATURAL GAS & WATER CONSUMPTION¹

Average Natural Gas Consumption	25m ³ /hour	28m ³ /hour
Average Water Consumption	15 litres/hour	

ELECTRICAL

Electrical Supply	220V / Single Phase / 50Hz	
Electrical Loading	2.8KW	3.5KW

WEIGHTS²

Incinerator	15,250Kg	26,500Kg
Chimney (20 meters when mounted off top of incinerator)	2,500Kg	4,500Kg

EMISSIONS TO ATMOSPHERE³

Particulate	30 mg/Nm ³
CO	100 mg/Nm ³
Sulphur Dioxide	200 mg/Nm ³
HCL	30 mg/Nm ³
Nitrogen Dioxide	300 mg/Nm ³
Dioxins and Furanes	0.1 mg/Nm ³
Smoke	Does not exceed No. 1 Ringelmann Scale
Emission Levels	In line with British and EPA Standard

LPG TANK (OPTION)

Quality Standard	BS EN 12817:2010
Capacity	2,000 Litres
Tank Pressure Rating	250 PSI
Estimated LPG Consumption	0.065m ³ /hour
Tank, Pipework (6 meters) and fittings are included	

WATER TREATMENT SYSTEM (OPTION)

To ensure clean water is dispersed in the drain/sewage line. Gas washer is fitted with a water treatment system. Water is dosed with a water treatment solution via water treatment solution pump – a further settlement tank and filters are provided – all constructed from stainless steel. Panel mounted pH monitor with automatic temperature compensation controls the water treatment solution flow.

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¹ Approximate Natural Gas and Water consumptions under ideal circumstances. Weather conditions, Atmospheric pressure and other factors beyond our control may change these numbers.

² Approximate weights

³ Emission levels printed herein may vary according to the composition of the waste, weather conditions, atmospheric pressure, altitude, etc.