TM

International Limited

Combustion Engineering for the 21st Century

RC RANGE

Rotary Incinerators

Rotary Kiln Technology - 50 to 6500 Kg/hr

RC500 Oil Fired Incinerator capable of 1500 kg/hr throughput

- Fully Automatic Feeding
- 24-Hour Continuous Operation
- Compliant with Full EC Emission Standards
- Multiwaste Disposal

TM

- **Rotary Kiln Technology**

The rotary kiln is a plant designed to operate for extended periods of time without shutdown or reduction in capacity or performance. This ability to operate continuously reduces fuel usage, maintenance and support equipment size.

In the case of rotary kiln, charging rate and burning rate are the same, this increases the overall capacity while reducing ash disposal and fuel costs.

The RC range is versatile and will handle multi waste streams, including liquids and sludge as well as solid material.

- **Design Advantage**

The 3Ts rotary package is designed to minimize both field installation in sites requiring minimal floor space. Automatic control and optional remote monitoring of the plant's operations means the RC range requires minimal manpower to function safely and reliably.

The Rotary chamber at 1100°C

The combustion chamber design and the refractory used in the lining of the chambers results in low thermal wear thus providing long plant life.

The number of moving parts within the system are minimal hence maintenance requirements are low.

The RC design ensures true retention time resulting in low emission levels. The system can be supplied complete with a ceramic Fibre Dry Filtration system, which would be necessary to meet the emission standards of European legislation. High combustion efficiencies, far in excess of the most stringent regulations, provides for low carbon monoxide and unburned hydrocarbon levels.

The environmental impact of any incinerator or waste treatment process should be considered carefully. Key issues, such as fuel efficiency, low emission and minimisation of waste are all achievable with the 3Ts RC rotary. The design also provides for a variable speed control for the rotary chamber. This unique feature provides flexibility for the operator to vary throughput within the units design range.

Automated PLC controls

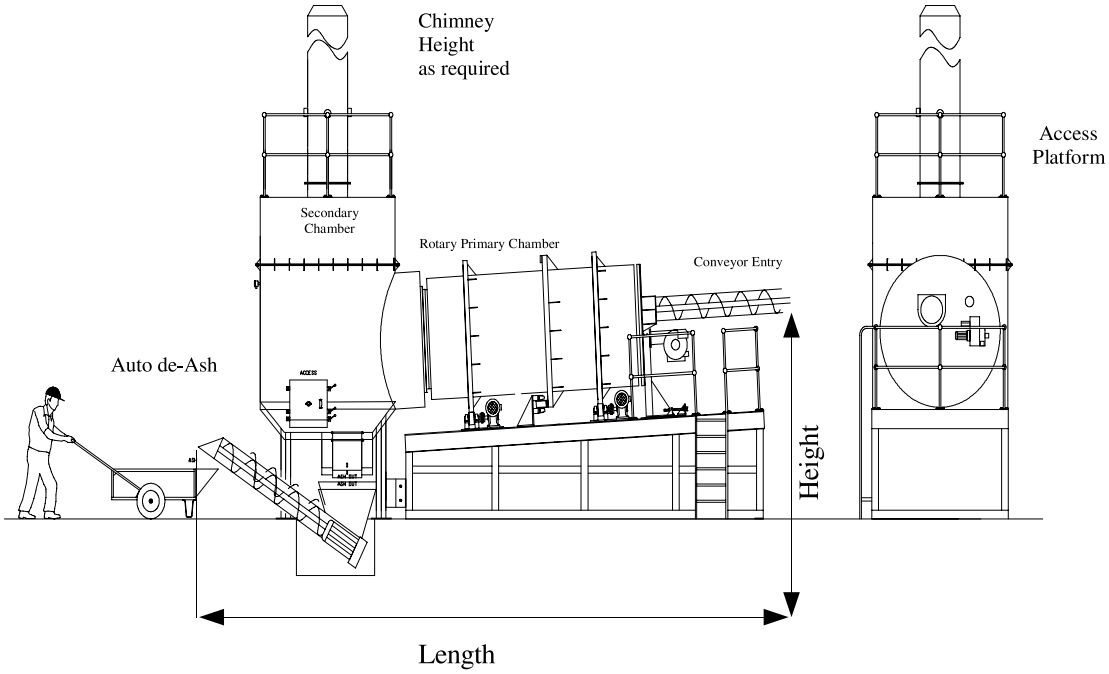
- ## Operational Advantages

The high temperature and controlled air design of the primary chamber allows for wide variations in waste feed properties. Whether loading high CV plastic or high moisture content waste, efficient combustion conditions are maintained.

The RC Rotary units are also tolerant to high ash content wastes. Unlike incinerators which use fixed or stepped hearth designs, the constant movement of the waste through a rotary kiln ensures there can be no short-circuiting resulting in un-burnt material leaving the system.

There is no manual clean out required, de-ashing is fully automatic clean and easy to maintain. There is also no burn down required due to the kilns ability to operate continuously.

The system is designed with two separate combustion chambers, a primary, which is the rotary system and a secondary post combustion chamber. The secondary chamber operates at temperatures of 1000°C to 1200°C and can be configured to provide a range of residence times from 0.5 to 2.0 seconds, depending upon throughput and specification.



Model	Throughput Range (Kg/hr)	Overall Dimensions (meters)			Weight (kg)	Floor Area (m^2)
		Length	Width	Height		
RC50	50-500	11.5	4.0	5.0	30,000	46
RC500	500-2000	14.0	4.2	5.0	47,000	59
RC2000	2000-4000	16.5	4.3	5.2	55,000	71
RC6000	4000-6000	20.0	4.7	5.2	65,000	94

Specifications are subject to change without notice
Chimney height is available upon request

Throughputs are based on waste having an average CV of 8 Mj/Kg
Length depends upon feeding system, dimensions shown assume unit without feeder

• The Best Environmental Solution

To meet the most stringent emission standards, 3Ts offers State of the Art dry gas ceramic fibre filtration technology incorporating acid gas sorption.

The dry gas ceramic fibre filtration system for flue gas cleaning is used for applications, which require low particulate emission levels typically below 25mg/Nm^3. Filtration takes place at 400°C which is safely above the Dioxin formation window. This eliminates the need for VOC treatment beyond the afterburner. The ceramic fibre elements efficiently filter flue gas of submicron particles. These ceramic filters dispose of filtered pollutants as dust at the base of the filter vessels by an automated procedure. The residue is then automatically discharged into drums, which are safely sealed to prevent fugitive releases.

The acid gas sorption system neutralizing acid gases can use either dry lime, calcium hydroxide or bicarbonates of soda.

• Ash Residue

Due to the incline of the rotary chamber, the incombustibles and ash residue make their way down to the de-ash unit at the base of the secondary chamber. The ash is then subjected to 1100°C for a minimum of 30 minutes before cooling and final discharge to the ash trolley or conveyor. Ash is typically 3%-4% of the original waste volume. The design of the RC rotary range ensures that ash residue meets international sterility standards.

• Applications

The RC range of rotary incinerators can be used for the incineration of most types of waste material: liquids, sludge and solids; including animal remains and veterinary waste, medical and pharmaceutical waste, fertilizer, meat and bone meal, domestic and general waste. All applications can be fitted with waste heat recovery systems if desired. The RC can operate continuously for 24 hours, which makes heat recovery a viable opportunity.

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