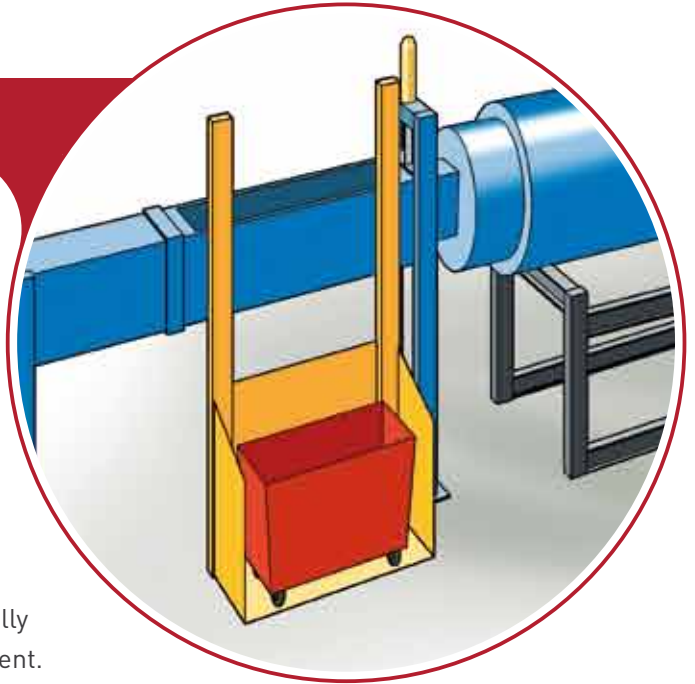


WASTE LOADING

Introducing waste into the primary combustion chamber may be carried out manually or automatically with the choice usually determined by the capacity of the plant and the nature of the waste. Practically bagged waste can be manually loaded into an incinerator having a capacity of up to 200kg/hour.

Above this capacity it is generally considered unsafe, physically demanding and operationally as well as environmentally inefficient.

Above 200kg automatically loading should be considered as mandatory and below this capacity, optional.



Manual Loading

Fixed and hot hearth incinerators arranged for manual loading will incorporate one or two interlocked hinged doors. The main door when opened will expose the whole of the primary chamber cross section, making it ideal for the bulk loading of waste and for the easy removal of ash.

The incinerator may also incorporate a batch load door, to enable smaller quantities of waste to be introduced on a continuous basis.

To prevent the ingress of uncontrolled air, the doors are fitted with ceramic seals.



Bin Tipper's / Elevator's / Container Handling

To facilitate establishments where the waste is stored and transported to the incinerator in wheeled bins, a bin tipper can be selected to transfer the waste either directly into the incinerator or into the incinerator via a ram loader.

The bin elevator / tipper incorporates a lifting cradle on to which the bin is

manoeuvred via a personnel safety gate. Once engaged into the tipper and gate is closed and the container on the demands of the control system is elevated under hydraulic or electric power.

Profiles incorporated on the tipper cause the bin to invert and the lid to open, discharging the waste.



Ram Loaders

The ram loader comprises of a horizontal or slightly inclined hydraulically operated loading machine, specifically designed to introduce the waste into the incinerator via an interlocked hydraulic charge door, which seals the primary combustion chamber from the waste and operator. This is both safe and environmentally efficient as it prevents the ingress of uncontrolled air, associated with manual loading.

Manufactured from heavy steel plate the ram loader incorporates a hinged feed door

and a hydraulically operated pushing ram, which on the demands of the control system, delivers the waste into the chamber via the hydraulic charge door.

Once the waste has been charged into the chamber, the pushing ram withdraws and the charge door closes in preparation for the next charge.



Crushers and Conveyors

For dense wastes such as wood or whole large animal carcasses, pre-treatment of the waste by crushing may be considered.

Pre-treatment of this type of waste has several advantages. Large quantities of waste may be processed through the crusher and stored within a hopper irrespective of the incinerators availability.

Crushing and shredding the waste, also massively increases the surface area of the waste.

As combustion works by thermally decomposing the surface area of a waste inwards, increasing the area exposed to the combustion process minimises fuel input and promotes stable operating conditions. Waste that is processed through the cutters of a crusher will be transported by a conveyor into a silo or storage hopper. On the demands of the incinerator, waste will be transferred by a second conveyor or pump directly into the incinerator's primary chamber.



Liquid / Sludge Feed Systems

Wastes such as oils, spent solvents, waste water, fats and emulsions, which would benefit from being atomised within the combustion chamber, would be pumped into the incinerator.

Liquid wastes will be stored in a tank fitted with optional heaters to promote the optimum pumping viscosity.

On the demands of the incinerator, the liquid would be pumped under pressure into the incinerator via a stainless steel alloy injection lance.

