

Hospital waste incinerators



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For proper disposal of hospital waste, incineration is the best solution. Incinerating the waste, all (potential) hazardous elements are destroyed properly. The environmental pollution is minimal because of the advanced combustion system. Another advantage is the total and unrecognisable destruction and size reduction of the waste.

General information hospital wastes

Hospital waste is generated from patient's health care institutions (hospital and nursing homes with medical facilities).

Specific hospital waste consists of:

- * Human anatomical remains and organic parts, which result from general and obstetric operations, autopsy and scientific research.
- * Laboratory animals or parts thereof and bedding waste from laboratory animals.
- * Waste from hospital wards or rooms in which patients have been isolated because of the risk of them infecting to hospital staff.
- * Waste from microbiological laboratories which has been infected with bacteria.
- * Blood, plasma and other liquid waste.
- * Disposables.

Hospital waste classification:

- Type nr. 2: Rubbish and garbage with 50 % moisture and 7 % incombustible solids and has a heating value of approx. 2,5 Mcal or 10,4 MJ/kg waste.
- Type nr. 3: Wet waste from hospitals and institutions with 70 % moisture and 5 % incombustible solids and has a heating value of approx. 1,5 Mcal of 6,2 MJ/kg waste.
- Type nr. 4: Pathological - Biological waste of hospitals and laboratories with 85 % moisture and 5 % incombustible solids and has a heating value of approx. 0,5 Mcal or 2,1 MJ/kg waste.

The actual hospital waste can be a mixture of above-mentioned waste classification and must be checked by the local hospital authority.

Note:

Important: To meet emission standards, above-mentioned waste may exclusively be collected in special heavy blue or black Polyethylene bags. The Polyethylene bags are made of a type of plastic which is harmless to the environment when incinerated. The hospitals have to store the sealed bags in their central storage area.

General:

The problem of solid waste disposal becomes of the utmost importance whenever severe laws impose to destruct waste on the same place it is produced, as it is the case at hospitals.

Waste destruction "on site" becomes a growing necessity, also for most hospitals and industries which have no other possibility of disposal or do not want, for different reasons to store their waste in the open air and prefer to destruct it immediately.

Immediate destruction must be carried out, however, not only under respect of air pollution rules but also simple and economical way involving minimum labour.

The packed unit incinerator is a two stage, controlled air combustion system with a high temperature incineration technology, to solve solid waste disposal problems.

Find your suitable hospital waste incinerator

A rough guideline to choose the suitable hospital waste incinerator can be given. For calculations, you can use a waste generation of 3,5 kg per bed per day for regular hospitals. Of course the actual waste generation differs from hospital to hospital. Developing countries will likely produce less waste.

Technical information

General

All our incinerators use two combustion chambers. In the first (primary) chamber, the waste is being destructed. From the primary chamber, the smoke goes to a secondary chamber, where the smoke is being burned again. In this second step most harmful parts in the gas are destructed. The smoke gases remain in this secondary chamber for at least 2 seconds.

The temperature in the primary chamber will be controlled by a burner control system, which holds the temperature in the primary chamber at 750°C. In the secondary chamber a burner keeps the temperature at at least 850°C.

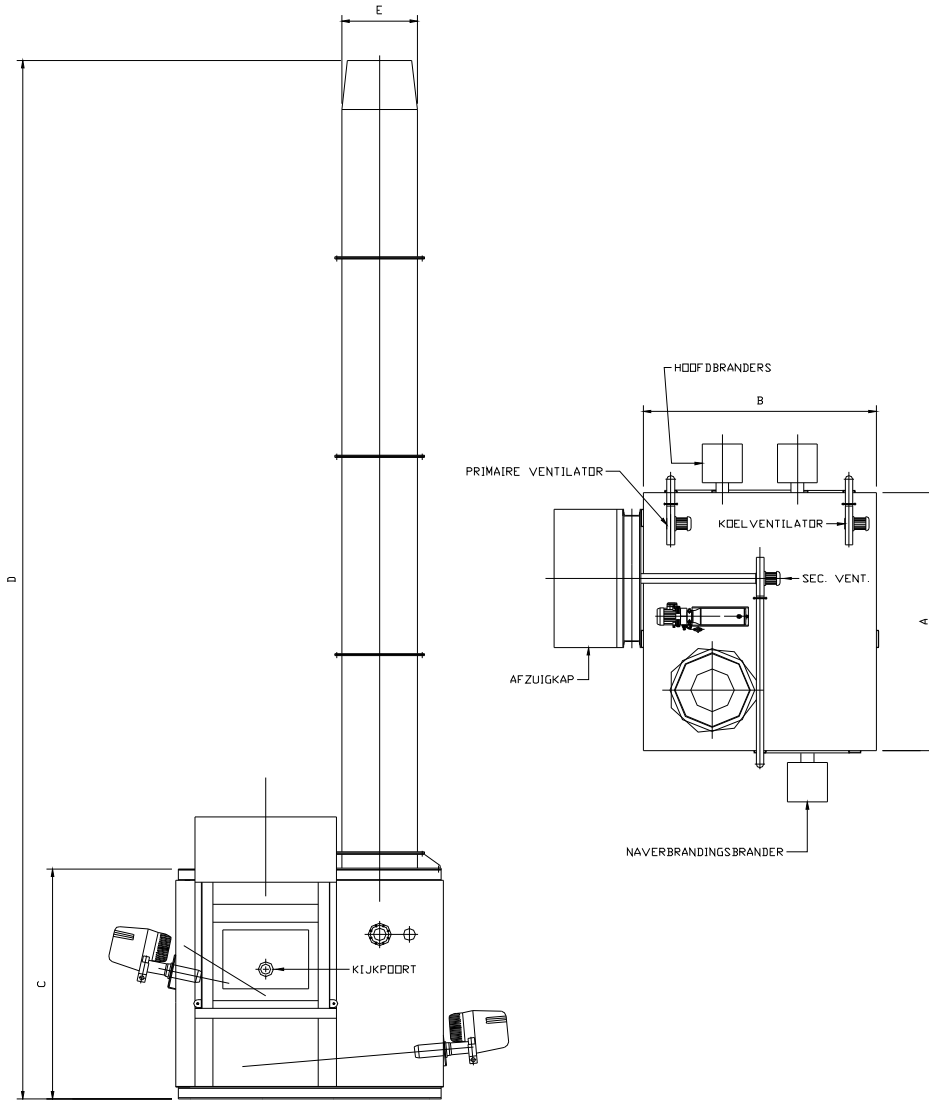
After the secondary chamber, the percentage of oxygen (O₂) in the gas is measured. With this parameter two fans are controlled, which blow the necessary combustion air into the primary and secondary chamber.

Mechanical loading system

A mechanical loading system is a feeder, which feeds the incinerator through a lock gate. A ram from time to time pushes an amount of waste in the combustion chamber. Because the incinerator door doesn't have to be opened, the combustion process is hardly disturbed. Using a mechanical loading system, the daily capacity of the incinerator can be enlarged.

A mechanical loading system relieves the operator from the dirty loading work, it improves the combustion process and it raises the capacity of the system.

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Model	Charge in kg	A in mm	B in mm	C in mm	D in mm	E in mm	Weight in kg
J 15	15	1.870	1.280	2.165	10.000	575	ca. 3.000
J 25	25	1.965	1.485	2.165	10.000	640	ca. 3.500
J 35	35	2.080	1.630	2.165	10.000	650	ca. 4.000
J 50	50	2.205	1.830	2.165	10.000	685	ca. 4.900
J 60	60	2.280	1.980	2.165	10.000	695	ca. 5.500
J 80	80	2.515	2.180	2.165	10.000	780	ca. 6.750
J 100	100	2.630	2.330	2.340	10.000	800	ca. 8.250
J 120	120	2.985	2.505	2.340	10.000	925	ca. 5.100
J 200	200	3.030	3.780	2.180	10.000	1.035	ca. 14.500
J 400	400	3.355	3.445	2.755	10.000	1.120	ca. 19.000
J 800	800	4.105	4.830	2.755	10.000	1.100	ca. 50.000

Dimensions for reference only