



**HOSPITAL AND INDUSTRIAL  
WASTE INCINERATORS**

**MOD. ECOTEC**

TECHNOLOGY - DESIGN - ENVIRONMENT





## TECHNOLOGY

Thanks to the FORTEC software management system, the cycle is completely controlled and automated

## DESIGN

The upper full-section door allows a comfortable load of every type of waste.

## ENVIRONMENT

Emission abatement systems based on Best Available Technology

Our waste incinerators mod. ECOTEC are ovens with a static chamber (or "Multistep chamber") designed for the thermo **destruction of waste having high average lower calorific value (L.C.V.)**. Designed to meet the needs of waste incineration for hospitals, medical laboratories, small communities, shopping centers, industry, airports and gum, paper, wood etc.

The **energy recovery system** from combustion gases, present as standard on each oven mod. ECOTEC, allows considerable operating savings by optimizing the combustion process and thus reducing fuel consumption compared to normal ovens; furthermore, it is possible to combine it with an additional energy recovery system suitable for **hot water, steam and heated diathermic oil production, at zero cost**.

On each of our incinerators mod. ECOTEC is installed a gas **post-combustion chamber**, which is adequately structured to **comply with** the operating parameters imposed by the current **anti-pollution regulations** such as:

- Working temperature:  $>850\text{ }^{\circ}\text{C}$   $> 1100\text{ }^{\circ}\text{C}$  according to waste category
- Gas retention time in post-combustion:  $>2''$
- Free oxygen level:  $>6\%$

The **dry depuration system** is combined with the **post-combustion** process of the effluent gases from the incineration chamber, making the emissions of the furnaces mod. ECOTEC **fully meeting the most stringent and restrictive anti-pollution regulations**.

The ECOTEC range of incinerators includes **destroying power** varying from **40 kg/h to 600 kg/h**.





# ZERO IMPACT

## PLANT SOLUTIONS

## TECHNOLOGY AT THE SERVICE OF THE ENVIRONMENT



### LOW EMISSIONS Process

Abatement of VOCs through Post-Combustion chamber

Treatment of pollutants and dust using Dry Depuration System

The **dry depuration system** which is installed on our systems allows to act directly on each single pollutant in order to comply with the most restrictive European and Worldwide regulations.

We can thus summarize the various depuration steps:

**Thermal postcombustion** chamber for depuration by oxidation of the SOVs that are present in the fumes, operating at temperatures higher than 850/1100°C in the presence of excess air at 6%.

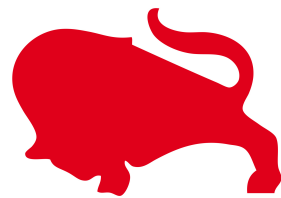
**Reduction of temperatures up to 180°C** for the subsequent blast chilling phases which are carried out by means of a heat exchanger fumes/water, fumes/air or fumes/diathermic oil, depending on the application requirements.

**Injection into the gas stream of ventilated lime hydrate** powder for the abatement, by absorption of the fluorine compounds (transformed into calcium fluorides  $\text{CaF}_2$ ) and of the sulfur compounds (transformed into calcium sulphates  $\text{CaSO}_4$ ); the hydrated lime also absorbs hydrofluoric acid (HF) well, and produces an even greater effect on hydrochloric acid (HCl) in relation to the higher humidity in the environment.

**Injection into the gas stream of activated carbon dust**, in order to prevent the formation of dioxins and furans. Activated carbon dust retains these pollutants by adsorption ensuring yields of up to 95%. There are commercially available mixes of hydrated lime and powder and powder of activated carbon 20/25% with the name of Sorbalite®

**Dedusting by bag filtration**, which allows to guarantee excellent and easy performance on dust reduction; our filtration system guarantees **dust emission standards of <5mg/mc**

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HUNDREDS OF CUSTOMERS IN THE WORLD HAVE CHOSEN OUR OVENS



Model	ECOTEC	550	1500	2500	5000	6000 Multistep	8000	10000	12000 Multistep	15000 Multistep
Incineration Chamber Volume	m <sup>3</sup>	0,55	1,5	2,5	5	6	8	10	12	15
Max Burner Capacity	Kg/h	40	100	150	200	250	250	400	500	650
Loading Capacity	Kg/cycle	70	200	300	600	Only continuous loading	1000	1250	Only continuous loading	Only continuous loading

\* indicative and non-binding data

## CUSTOMIZED SERVICES

- Feasibility studies
- Functional Layouts
- Thermo fluid dynamics CFD simulations
- Assistance with authorization procedures
- Scheduled maintenance
- Remote assistance

## QUALITY

Certified Company Management System **ISO 9001: 2015**

Certified Environmental Management System **ISO 14001:2015**



For.Tec. Forniture Tecnologiche Srl - Via Appia km 186.900 81050 Francolise (CE)  
Tel +39 0823.88.11.05 Mail: info@fortec-inceneritori.it Web: www.fortec-inceneritori.it

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