



Incinerators series "DA" controlled combustion



Incinerators series "DA"

a dual fuel incineration system

environmentally friendly solution for the disposal of solid waste

The incineration by the controlled combustion Incinerators "DA" series takes place according to the most advanced techniques and allows the destruction of waste without causing air pollution and without the need of any purifier.

The Incinerators "DA" series are based on the principle of combustion into two stages: the first takes place in the combustion chamber and the second in the reactor.

Based on this principle the products to be incinerated are subjected to the first stage in the combustion chamber in which the waste is stowed. This phase takes place in air defect, thus giving rise to a process of distillation of the volatile components with a consequent production of gaseous products.

In the second phase these gaseous products, before being evacuated from the chimney, are forced to pass through the reactor, previously heated to the operating temperature and in which flows through the nozzles, the quantity of air necessary for the complete oxidation and full combustion of the products gaseous.

Specialized institutes have proven the incinerator Series "DA" by burning waste of various types, and measuring the emission of solid particles and unburnt gaseous residues.

The emission of solid and gaseous unburned parts was below those required by the air pollution standards.

ADVANTAGES

The main practical advantages that are obtained with the Incinerators controlled combustion Series "DA" can be summarized as follows:

1) No fumes

Due to the integral in the combustion reactor of the combustion products.

2) Sensible saving

Due to the reduction of the manual operations which are limited to the load of the waste and to the extraction of the slag.

The incinerator can be loaded during normal working hours, also acting as a deposit of material to be eliminated, while during the incineration process, which takes place in a completely autonomous and automatic way, does not require assistance and the presence of personnel, for which it can work even during the night hours.

3) Regularity of the operation

Due to the effectiveness of the automatic adjustment of combustion; in fact, once calibrated the operating cycle in dependence of the quality of the waste, the plant will always work in the same way, always providing the same optimal results.

4) Increased cleaning

During operation, the incinerator cannot and should not be opened for the fire government or for further loading for which all the external environment and the incinerator itself remain clean.

OPERATING CYCLE

The operating cycle, fully automatic, is controlled by a programmer device which controls all the specific equipment in a way that enter into operation at the time predetermined.

After that the combustion chamber has been loaded and filled entirely, and after that the loading door sealing has been closed, it gives start to the incineration process that involves the following cyclic phases:

1) At the start controlled by the operator, the programmer device is put into operation the burners of the reactor.

2) Upon reaching the reactor operating temperature (1000 ° C) the adjusting device automatically causes the electric starter that provides the combustion air and the simultaneous ignition of the burner of the combustion chamber.

3) Subsequently, the temperature controllers of the combustion chamber and the reactor, suitably calibrated, will maintain, by means of automatic starting and stopping of the burners, the predetermined temperatures up incineration of all combustible parts.

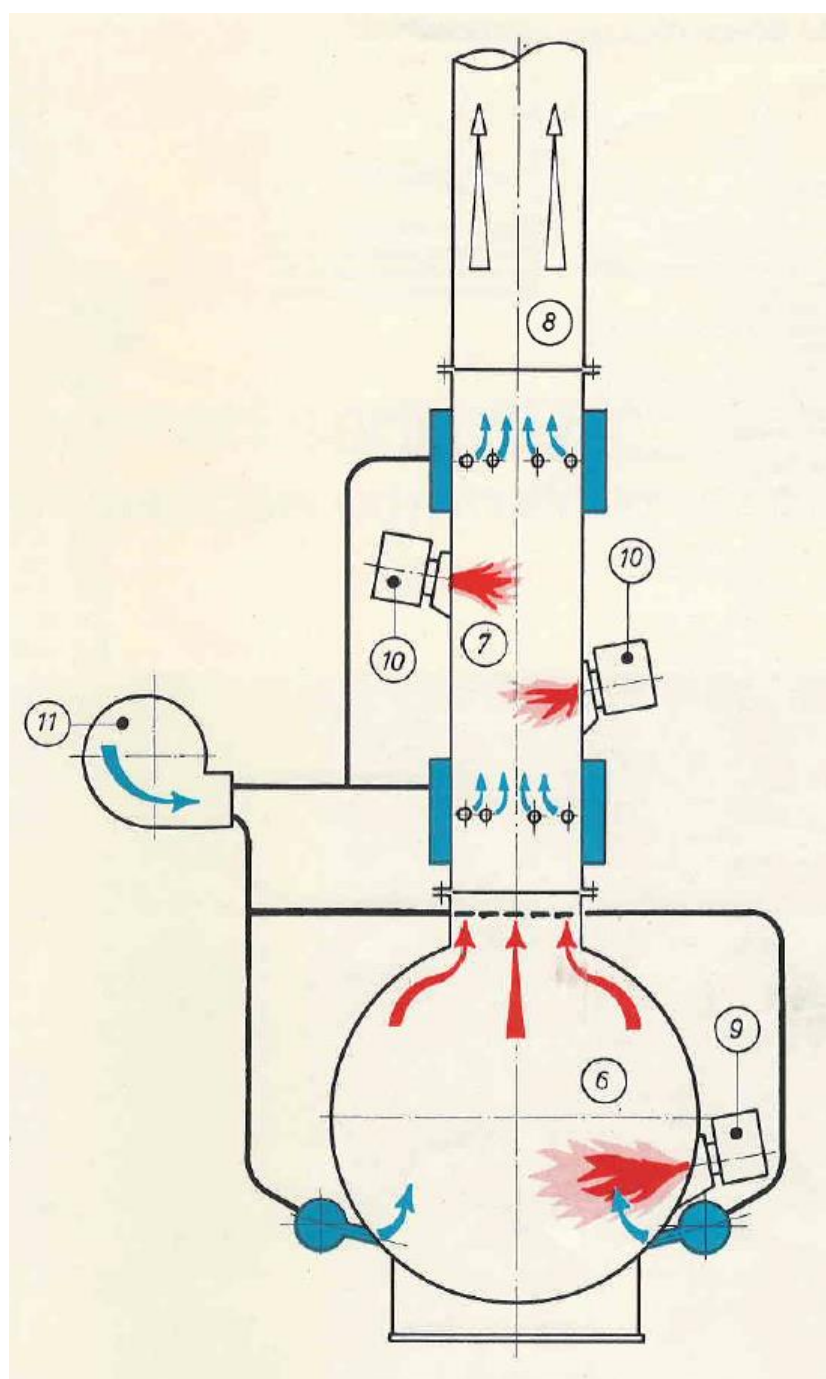
4) At the end of the phase of incineration the programmer causes the disconnection, possibly differentiated, of all the burners while maintaining the air inlet in order to cool the combustion chamber.

5) Once cooled the programmer will cause the automatic shutdown of the electric fan and at this point it will be possible therefore:

- Reopen the oven, remove the slag, stow a new load in the combustion chamber and start another incineration cycle.

N.B.: The period of operation is secured by the programmer that is adjusted in dependence of the quality of waste.

CICLE OPERATION SCHEME



LEGEND:

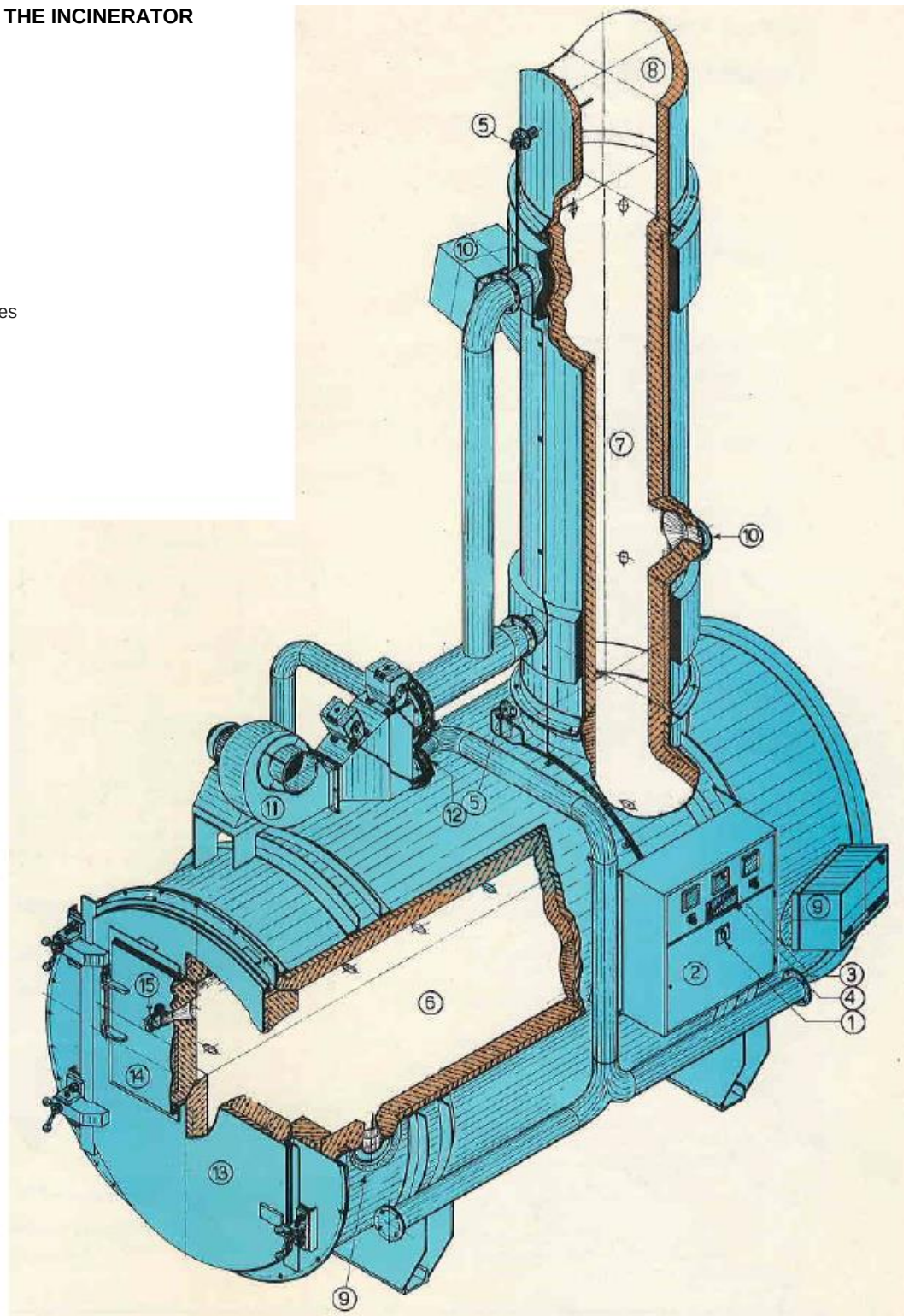
- 6. Combustion chamber
- 7. Reactor
- 8. Chimney
- 9. Primary burners
- 10. Secondary burners
- 11. Electric ventilator

SPECIFICATIONS AND DIMENSIONS								
Models	Volume max waste incineration mc/cycle	Dimensions Approx. Incinerator				Standard chimney dimensions		
		Length mm	Depth mm	Height mm	Weight kg	Ø External mm	Height mm	Weight kg
DA 2	2	2600	3500	4180	5500	700	5500	1450
DA 5	5	2600	4100	5480	8500	800	5500	1700
DA 10	10	3200	4700	5060	14100	900	5500	1900
DA 15	15	3200	6200	5060	18200	1000	5500	2100
DA 20	20	3600	6400	5320	21200	1100	5500	2300

SCHEMATIC SECTION OF THE INCINERATOR

LEGEND

1. Main switch
2. Programmer
3. Temperature controller
4. Deprimometer
5. Thermocouples
6. Combustion chamber
7. Reactor
8. Chimney
9. Primary burners
10. Secondary burners
11. Electrical ventilator
12. Combustion air control valves
13. Loading door
14. Inspection door
15. Inspection spyhole



LIST OF MAIN PLANTS REALIZED

MODEL	CLIENT	FIELD OF USE
DA 5	Industrie Engelhard S.p.A – Roma	Precious metal recovery industry
DA 2	Rockwell Rimoldi S.p.A. – Milano	Mechanic industry (industrial sewing machines)
DA 20	FIAT S.p.A. – Termoli	Mechanic industry (C)
DA 20	F.I.S. S.p.A. – Alt di Montecchio Maggiore	Chemical industry
DA 10	Industrie Engelhard S.p.A – Roma	Precious metal recovery industry
DA 10	Simmel S.p.A. – Castelfranco Veneto	Mechanic industry military supplies
DA 2	Teodomiro Dal Negro S.n.c. – Treviso	Playing cards factory
DA 5	Domenico De Vivo – Potenza	For Hospital
DA 10	Ospedale di Cuasso al Monte	Hospital
DA 5	Ospedale Civile di Isola della Scala	Hospital
DA ?	Ospedale F. Campana – Seravezza	Hospital
DA 15	Ente Ospedaliero E. Agnelli – Pinerolo	Hospital
DA 5	Ospedale Civile di Cologna Veneta	Hospital
DA 5	Ospedale Sant'Ambrogio di Mortara	Hospital
DA 10	Comune di Verona	Urban Cemetery
DA 5	Ospedale di Termoli	Hospital
DA 20	Aermarelli - Milano	For Tobacco Factory in Tripoli, Libya (C)
DA 20	Pio Istituto Santa Corona – Milano	Hospital
DA 5	Ospedale Civile di Mondovì	Hospital
DA 5	Ospedali Riuniti di Asolo	Hospital
DA 10	SIVA – Settimo Torinese	Paints Industry
DA 10	Super Iride – Calenzano	Chemical industry
DA 15	Ospedali di Bologna	Hospital
DA 15	Istituto Sclavo – Siena	Drug Industry
DA 5	Domenico De Vivo – Potenza	For Hospital
DA 5	Ospedale Civile di Rovereto	Hospital
DA 10	Ospedale Civile di Carpi	Hospital
DA 1	Isal Tessari – Bovisio Masciago	Furniture Industry
DA 10	EURATOM C.C.R. – Ispra	Atomic Centre (C)
DA 5	Ospedale S. Maria degli Angeli – Pordenone	Hospital (C)
DA 5	Ospedale Armani – Arco	Hospital
DA 20	Soc. SOBEA – Ruel Malmaison, Francia	Municipal solid waste of Courtenay, France (C)
DA 5	Totaltermica S.p.A. – Milano (per Arabia Saudita)	Chemical industry (C)
DA 20	Ospedali di Bologna	Hospital (C)
DA 5	Contentitori Trasporti – La Spezia	Ecological Services
DA 20	Pars Industrial Co. Inc. – Teheran, Iran	Food Industry (C)
DA 20	Minoo Industrial Co. Inc. – Teheran, Iran	Food Industry (C)
DA 2	Ospedale San Lazzaro - Torino	Hospital
DA 15	Ospedale Civile Annunziata – Cosenza	Hospital
DA 5	Ospedale Provinciale – Sesto San Giovanni	Hospital
DA 2	Ospedale Civile di Auronzo di Cadore	Hospital
DA 10	Ospedale Generale "Villa San Pietro" – Roma	Hospital
DA 10	Istituto "San Giovanni di Dio" Fatebenefratelli – Genzano di Roma	Hospital
DA 10	Ospedale Sacro Cuore di Gesù – Benevento	Hospital
DA 10	Ospedale B.V.M. del Buon Consiglio – Napoli	Hospital
DA 15	Istituti G. Gaslini – Genova	Hospital
DA 5	Istituti Fisioterapici Ospedalieri - Roma	Hospital
DA 5	Ospedale Civile di Atezza	Hospital
DA 2	Ospedale di Forlimpopoli	Hospital
DA 15	Ospedale Sant'Anna – Torino	Hospital
DA 2	Istituti Ospedalieri di Trento	Hospital
DA 5	SAIPEM S.p.A. – San Donato Milanese	Chemical Industry
DA 10	Ospedale Boldrini - Thiene	Hospital (RC)
DA 5	Martini e Rossi S.p.A. – Torino	Beverage Industry (RC) (C)
DA 2	Ospedale di Rovato	Hospital
DA 10	Talento S.p.A. – Milano (per Arabia Saudita)	Chemical Industry (C)
DA 2	Centro Auxologico di Piancavallo	Hospital
DA 10	Chimet S.p.A. – Badia al Piano	Precious Metal Recovery Industry
DA 5	Ospedale Civile di Cittadella	Hospital (C)
DA 5	Impresa Fadalti – Sacile	Conegliano Hospital, Italy (C)
DA 5	Ospedale San Giacomo – Novi Ligure	Hospital
DA 5	Ospedale di Chiari	Hospital
DA 10	Centro Traumatologico Ortopedico – Torino	Hospital
DA 10	Italconsult S.p.A. – Roma (per Arabia Saudita)	Detergents Industry
DA 5	A.N.N.U. – Milano	Experimental Furnace financed by Italy's CNR
DA 5	Ospedale San Timoteo – Termoli	Hospital
DA 5	Totaltermica – Milano	Abu Dhabi Hospital, United Arab Emirates

DA 5	Ente Ospedaliero San Paolo – Savona	Hospital
DA 5	Casa Circondariale – Poggioreale	Prison
DA 5	Ospedale Sacro Cuore – Negrar	Hospital
DA 2	Chemetron – Milano	Chemical Industry
DA 1	Regione Autonoma Valle d'Aosta	Hygiene and prophylaxis Laboratory
DA 1	IMAT S.p.A. – Roma	Dhahran Hospital, Saudi Arabia
DA 1	IMAT S.p.A. – Roma	Dhahran Hospital, Saudi Arabia
DA 10	Comune di Napoli	Municipal Slaughterhouse
DA 2	Città di Barletta	Cemetery
DA 1	Tecnoimpianti – Pordenone	Tabhuk Hospital, Saudi Arabia
DA 1	Tecnoimpianti – Pordenone	Tabhuk Hospital, Saudi Arabia
DA 1	A.P.T. – Milano	Khamis-Muschait Hospital, Saudi Arabia
DA 1	A.P.T. – Milano	Khamis-Muschait Hospital, Saudi Arabia
DA 5	Ospedale Civile – Ciriè	Hospital
DA 10	Ente Ospedaliero Comprensorio di Lugo	Hospital
DA 1	La Manna S.p.A. – Ospedale Euganeo	Feed Mill
DA 2	Impresa Iauto T. – Castiglione Cosentino	Hospital
DA 10	Ospedale Civile Sant'Andrea – La Spezia	Hospital
DA 5	Ospedale Civile Sant'Andrea – La Spezia	Hospital
DA 5	Fidia-Farmaceutici – Abano Terme	Pharmaceutical Industry
DA 5	Ospedali Riuniti Leonardo e Riboli – Lavagna	Hospital
DA 5	G. Balestra e F. – Bassano del Grappa	Precious Metals Industry
DA 10	Cantieri Nautici Gobbi – Sariano di Gropparello	Shipyard (RC)
DA 5	Congregazione Figli Immacolata per Istituto Dermopatico di Roma	Hospital
DA 5	Vendramini – Trevignano	Shoe factory (RC)
DA 20	Marangoni Pneumatici – Rovereto	Tire Industry (RC) (C)
DA 10	Plibrico A/S – Holte, Danimarca	Silkeborg Hospital, Denmark
DA 5	Daniele Jacorossi S.p.A. – Roma	Aversa Hospital, Italy
DA 5	Ospedale Santa Maria Bianca – Roma	Hospital
DA 10	Ospedale Civici Riuniti "G. Rummo" - Benevento	Hospital
DA 5	Ospedale San Carlo – Genova Voltri	Hospital
DA 10	Ospedale di Circolo "A. Bellini" – Somma Lombardo	Hospital
DA 1	Ippolito e Pisani S.p.A. – Isola del Liri	Textile Industry
DA 2	Ente Ospedaliero E. e T. Agnelli – Pra' Catinat	Hospital
DA 5	Ospedale Civile – Asola	Hospital
DA 2	Nolan S.p.A. - Mozzo	Sporting Goods Industry
DA 5	Ospedale Civico – Chivasso	Hospital
DA 15	Città di Torino	Cemetery
DA 10	Ospedale Civile – Piacenza	Hospital
DA 1	Clinica "Villa Claudia" – Roma	Hospital
DA 2	Biacor S.p.A. – Padova	Chemical Industry
DA 20	Comune di Ravanusa	Municipal Solid Waste
DA 5	AL MAWRID – Kuwait	Solid Waste, Navy Base
DA 5	AL MAWRID – Kuwait	Solid Waste, Navy Base
DA L 5000	AL MAWRID – Kuwait	Liquid Waste, Navy Base
DA 5	Istituto San Giovanni di Dio Fatebenefratelli – Roma	Hospital
Boiler CRV150	Industrie Engelhard S.p.A. – Roma	Precious Metal Recovery Industry
DA 5	Ospedale degli Infermi – Biella	Hospital (RC) (C)
DA 20	SOBEA – Ruel Malmaison, Francia	Compost Waste of Barcares, France
DA 5	Ospedale Civile – Palmanova	Hospital (C)
DA 15	Ospedale Civile Santa Croce – Cuneo	Hospital
DA 20	Consaedil S.r.l. – Formia	Municipal Solid Waste
DA 5	Industrie Engelhard S.p.A. – Roma	Precious Metal Recovery Industry
DA 5	Ospedale Civile – Palmanova	Hospital
DA 20	Manifattura Tabacchi – Rovereto	Tobacco Factory (RC) (C)
DA 15	Opere Pie Ospitaliere di Alessandria	Hospital (C)
DA 2	U.S.L. Valdarno Superiore Sud – Montevarchi	Hospital (C)

(RC) = plant with heat recovery
(C) = plant with mechanical loader

A I B S r l

Via Stilicone, 25 – 20154 Milan (Italy)

Tel./Fax +39 02 34538071 | E-mail: info@aibsrl.com

w w w . a i b s r l . c o m