SPECIFICAZIONI TECNICHE

INCENERITORE MOBILE CON SISTEMA TRATTAMENTO FUMI

DESCRIZIONE SISTEMA

Progettazione ed operazione: L'inceneritore ed i suoi accessori sono disegnati per massimo carico di kg per ora secondo il modello di rifiuti pericolosi, contaminanti o urbani.

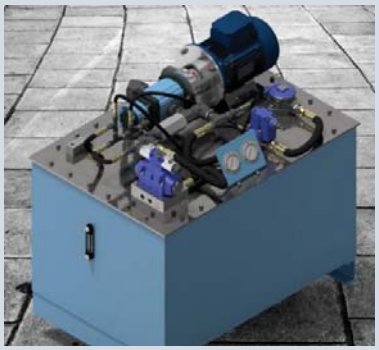
Ammessa operazione continua. Temperature d'impiego esterne da -10 a 50 gradi centigradi ed umidità relativa da 15 a 90 %.

PARTO	DESCRIZIONE	N.
1.	Trailer	1
2.	Panello elettrico	1
3.	Panello di controllo	1
4.	Camera d'incenerimento principale	1
5.	Caricatore idraulico	1
6.	Bruciatori diesel camera principale	2
7.	Camera post combustione	1
8.	Brucciatori camera Post Combustione	1
9.	Air quench (scambiatore fumi/aria)	1
10.	Aspiratore gas di scarico	1
11.	Scrubber con pompa acqua incorporata	1
12.	Unità idraulica	1
13.	Cimino estendibile	1
14.	Sistema idraulico estenzione cimino	1
15.	Tubi e condotti in acciaio inossidabile	1
16.	Freezer per i rifiuti (OPZIONALE)	1
17.	Caricatore posteriore (OPZIONALE)	1
17.	Scale, copertura (OZTIONALI)	1

CAMERA D'INCENERIMENTO PRINCIPALE

Materiale esterno, acciaio inossidabile. Ghise non sono impiegate da nessuna parte.
FOrnito con caricatore automatico dei rifiuti e chiusura controllata. Progettato secondo le regole ASME per la pressione e la temperatura. Completamente radiografato prima della consegna. La temperatura delle superfici esterne rimangono quelle dell'ambiente e sono classificate T4.

Refrattari impiegati con criteri severi. La superficie calda delle camere sono costruite da materiale a getto di Alta percentuale di Alumina.



INVOLUCRO:

Acciao inossidabile 304 (4mm) con stratto isolante di spessore 115 mm e 120mm di refrattario ceramico (resistente fino a 2200ºC).

Il disegno prevede oltre 3 secondi di retenzione dei fumi nella camera proncipale di incenerimento. I bruciatori sono controllati da software dedicato (BMS) e l'unità logica, mentre il briciatore della camera post incenerimento garantisce una temperatura costante di 1300 ºC

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Refrattari:
Analisi Chimica (%):
Al_2O_3 : 71
SiO_2 : 24,5
Fe_2O_3 : 1,1
Tipo: IDEAL BK 85
Classificazione: HA 75
Refrattarietà (S.C.): 38
Refrattarietà sotto carico ºC: (t0,5): 1700
Materiale primo (base) : Mullite / High Al. Raw Mat.
Densità (gr/cm^3): 2.60
Porosità apparente (% b.v.): 18
C.C.S. (N/mm^2): 70

BRUCIATORI & BURNER MANAGEMENT SYSTEM

I bruciatori diesel sono progettati al 120% del loro carico di operazione normale.
Controllati in continuo con scansione fiamma, regolazione automatica aria etc. I bruciatori sono provvisticon apposito software dedicato (Burner Managment System) e tutti i controlli necessari per un sicuro avvio ed arresto delle macchine.
Temperatura minima di operazione Camera Principale 1200 °C
Temperatura minima di operazione Camera Secondaria 1200 °C
Temperatura massima di operazione Camera Principale 1300 °C
Temperatura massima di operazione Camera Secondaria 1700 °C

ASPIRATORI

Gli aspiratori sono di tipo centrifugo.
La costruzione permette l'estrazione facile della ventola. Spessore materiale 4 mm.
Provvisti di valvole di drenaggio.

SCATOLE RIFIUTI SPECIALI

Contenitori di cartone per rifiuti ospedalieri

Costruiti con 75% materiale riciclato contenenti sacchetto di polietilene ad alta densità completo di doppia chiusura. Capacità 10 e 20 litri. Ultra leggero tipo °fold-flat° con quantità di plastica ridotta. Conformi alle Norme di Incenerimento.

Freezer Box

Optional freezer per un transporto sicuro dei rifiuti con motore a diesel indipendente.

AIR POLLUTION CONTROL FACILITY

Scambiatore e quench air sono provvisti per il raffreddamento dei fumi a 100-130 °C.
Scrubber ad acqua (SS304) con iniezione di alta pressione.
Cimino estendibile. Il cimino si estende con due cilindri idraulici telescopici.
Estensione massima durante l'operazione 5,5 m da terra.

PANELLO ELETTRICO E STRUMENTAZIONE

Interuttore di ripristino da sovracarico su ambedue i circuiti tensione e neutro. Correttore di voltaggio che permette l'operazioen anche con sballo di -/+30%. 240 V (+/-10). Provvisto di regolatori di prottezione (AVR).
Tutti motori sono 3 phasi 460V +/-10% 60Hz e controllati da Variable frequency drive (VFD)
PLC modulare. Provvisto per la programmazione ed il controllo un schermo a tatto con il software appropriato.

PANELLO DI CONTROLLO

Operazione totalmente automatica. Controllo totale e programmazione attraverso touch screen semplice ed ambiente grafico amichevole all'utente.

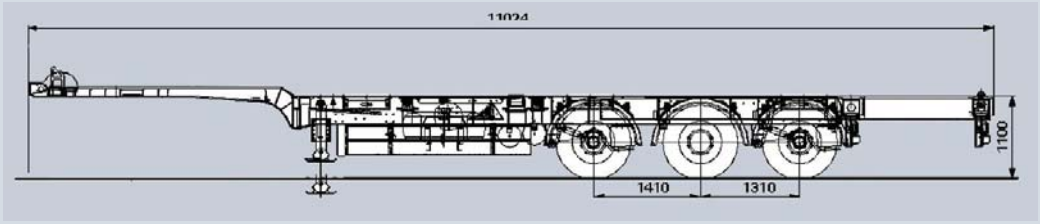
Il panello è costruito da lamiera di acciaio inossidabile di spessore 3mm La facciata è inclinata mentre tutto è condizionato dagli appositi condizionatori.

SERBATOIO CARBURANTE

Serbatoio metallico costruito da lamiera 4 mm di spessore. Colore bianco.
Capacità 2000 litri, con apertura per l'ispezione in alto. Indicatore livello e tappo di rifornimento.

TRAILER

Singolo tre-assi semitrailer ZORZI. Sospensioni ad aria, freni a tamburo. Basso, leggero e idoneo per l'applicazione.

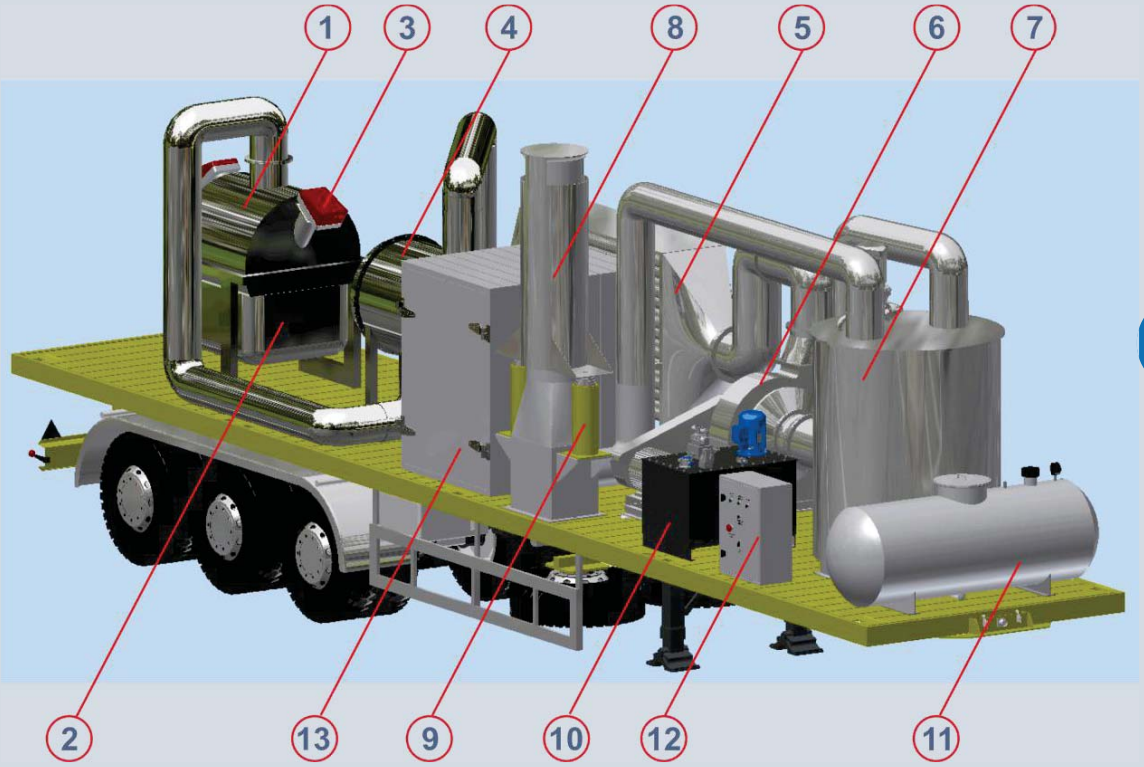


RICAMBI

Sono inclusi ricambi per un anno.

GARANZIA

LA garanzia copre ogni malfunzionamento per un periodo di 12 mesi come prevede il tagliando. Pezzi di ricambio sono disponibili per 10 anni.



1. *CAMERA PRINCIPALE*
2. *CARICATORE AUTOMATICO*
3. *BRUCIATORE*
4. *CAMERA SECONDARIA*
5. *AIR QUENCH*
6. *ASPIRATORI*
7. *WET SCRUBBER*
8. *CIMINO ESTENDIBILE*
9. *CILINDRO ESTENZIONE CIMINO*
10. *UNITA' HIDRAULICA*
11. *SERBATOIO DIESEL*
12. *PANELLO ELETTRICO*
13. *FREEZER*

MATERIALI

TELAIO	ACCIAO INOSSIDABILE AISI 304
ESTERNO	ACCIAO INOSSIDABILE AISI 304
STRATO ISOLANTE CERAMICO	MAT125 based cast ceramic insulation
STRATO REFRATTARIO	MgO based cast ceramic 2200°C
POST GAS INCINERATOR	
ESTERNO	ACCIAO INOSSIDABILE AISI 304
STRATO ISOLANTE CERAMICO	MAT125 based cast ceramic insulation
STRATO REFRATTARIO	MgO based cast ceramic 2200°C
SCAMBIATORE	ACCIAO INOSSIDABILE AISI 304
CRUBBER	ACCIAO INOSSIDABILE AISI 304
FILTRI CARBONE ATTIVO	ACCIAO INOSSIDABILE AISI 304

CONTROL SYSTEM

CONTROLLER	LOGIC CONTROLLER PROCESSING
OPERATION AND MONITORING	COLOR LCD TOUCH SCREEN 10''
POLLUTION MONITORING	COLOR LCD TOUCH SCREEN 10''

OPERATION

OPERATION MODE	FULLY AUTOMATIC PROGRAMMABLE
OPERATION PROGRAMS	ADAPTIVE MODE
STORAGE DATA OF COMBUSTION	SD CARD

TEMPERATURES

PREHEATING TEMPERATURE	300°C
PYROLYSIS PHASE	1300°C
INCINERATION TEMPERATURE	1300°C
FANS CUT OFF TEMPERATURE	150°C

Conforme alle Direttive 37/89/EC e 2000/76/EC.

TECHNICAL DATA

MOBILE WASTE INCINERATOR AND FLEW GAS TREATMENT

SYSTEM DESCRIPTION

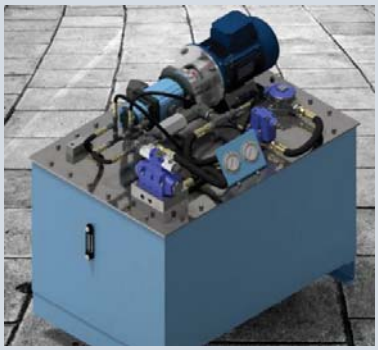
Design and operating Cases: The Incinerator and its accessories shall be designed for the maximum medical, biohazardous and general waste load up to 500 Kg/hr.
Capable of operating continuously in ambient temperature of -10 to 50 deg C and relative humidity of 15 to 90%.

PARTS

	DESCRIPTION	N.
1.	Trailer	1
2.	Electrical Panel	1
3.	Control Panel (PLC, Touch screen, Var. Freq. Drives)	1
4.	Main incinerator chamber	1
5.	Waste Automatic loader (Hydraulic)	1
6.	Main chamber's diesel burners	2
7.	Post combustion chamber	1
8.	Post combustion chamber's burner	1
9.	Air quench (gas/air exchanger)	1
10.	Exhaust gases fan	1
11.	Wet scrubber with incorporated pump	1
12.	Hydraulic Power Unit	1
13.	Extendable chimney	1
14.	Chimney's extension hydraulic system	1
15.	Stainless steel ducts and tubes (all)	1
16.	Freezer for waste disposal (OPTIONAL)	1
17.	Loading hydraulic rear platform (OPTIONAL)	1
17.	Stairs, covering (OPTIONAL)	1

INCINERATION CHAMBER

Material of construction is stainless steel. Cast iron is not used in the package.
Provided with an automatic loader and closure The incinerator chamber it is designed according to ASME for the design pressure and temperature. Complete incinerator chamber will be spot radiographed.
The exterior surface temperature of all components of the incinerator package remains considered specified temperature class of T4.
The Incinerator and its accessories it is designed for the maximum waste up to 500 Kg/hr.
Refractory, based on the above criteria. The hot face refractory for the incinerator's chambers is made by High Alumina castable material. It is provided an automatic bottom automatic loader. (Hydraulic powered)



CASING:

Stainless Steel 304 (4mm) with Heat insulating lining 115 mm and 120mm ceramic refractory lining (resistant up to 2200oC).

Design of Gas flue provides more than 3 sec retention into the primary chamber.
4 x Diesel burners at the primary unit, controlled by the logic control unit (BMS)
Post burner for the gases with 1 x Diesel burner constant temperature 1300 °C.

Material of construction : External SS 304, The exterior surface temperature of the combustion chamber remains at the ambient temperature.

Refractory cloak : The hot face refractory for the incinerator chamber it is made by High Alumina Refractory Castable thickness 120 mm.
Chemical Analysis (%):
Al_2O_3 : 71
SiO_2 : 24,5
Fe_2O_3 : 1,1
Type: IDEAL BK 85
Classification: HA 75
Refractoriness (S.C.): 38
Refractoriness Under Load °C: (t0,5): 1700
Raw Material Basis: Mullite / High Al. Raw Mat.
Bulk Density (gr/cm^3): 2.60
Apparent Porosity (% b.v.): 18
C.C.S. (N/mm^2): 70

Insulating cloak: Castable thickness120 mm.

BURNER & BURNER MANAGEMENT SYSTEM

All burners are diesel fired and sized for 120% of its design load. Are provided 2 burners for the main chamber and 1 for the post incineration. The burners are made with a continuous controller, flame detection scanner, ignition pert and sight port, burner air register etc. Burners are provided with a dedicated Burner Management System (BMS) and all controls and instrumentation necessary for the safe and complete automatic start-up and shut down of the Package.
Minimum operational Temp. Main Chamber 1200 °C
Minimum operational Temp. Post Chamber 1200 °C
Max Main Chamber's Temp. 1300 °C
Max Post Incineration Chamber's Temp. 1700 °C

FANS

Fans will be centrifugal type.
Fan housing are fabricated type stiffened and split for removal of impeller and shaft without disturbing bearing pedestals. Plate thickness of 4 mm. Fan inlet and outlet nozzles will be duct type flanges suitable to take the load of the ducting. Fan casing are provided with drain connection and valve.
Impellers are fabricated type.

WASTE HANDLING FACILITY

Cardboard Clinical Waste Container

Cardboard clinical waste container constructed from 75% recycled material and contains a high-density polyethylene (HDPE) liner complete with two closures. Available in 10 and 20 liter sizes. It's ultra-lightweight 'fold flat' design. The low plastic content ensures that processing emissions are minimized. 'Pop up' assembly which enables ease of use. Integral 'draw' band to facilitate closure of the bag and secondary closure for secure containment. Integrated carry handles for ease of transportation. Available in white and yellow with corresponding colored bags. Conforms to waste segregation guidelines.

Freezer Box

Optional freezer compartment for the safe transportation and the arrangement of the filled cartons. Installed on the trailer with independent diesel engine for the compressor.

AIR POLLUTION CONTROL FACILITY

An exchanger and quench air exchanger is provided to reduce exhaust gases temperature to 100-130 °C. (SS304)
A wet scrubber also is provided (SS304). Hight pressure jet washing system.
Extendable Chimney. The stack is extendible by two telescopic hydraulic cylinders.
Two components parts. Max erection during operation 5,5 m from the ground.

ELECTRICALS AND INSTRUMENTATION

Resettable overcurrent breaker is fitted on both live and neutral supply lines. Voltage corrector / stabilizer to allow operation at ± 30% of local rated voltage. Electrical equipment, is compatible with voltage 240 +/- 10 Volts as well as 110 +/- 10 volts.
Electrical equipment is provided with automatic voltage regulators (AVR), to protect equipment. Back-up rechargeable batteries and chargers, allow the functionality even when the normal power supply is interrupted. The motors in the packages are 3 phase 460V +/-10% 60Hz increased safety type Variable frequency drive (VFD) are provided for each motor .
PLC system is of modular design. The package provides a programming and control touch screen including the necessary software, dongle required for programming and configuration of the PLC .

CONTROL PANEL

Fully automatic operation . Full control and pre-set operation by a touch screen simple and friendly to user. Graphics helps the user to control the process.

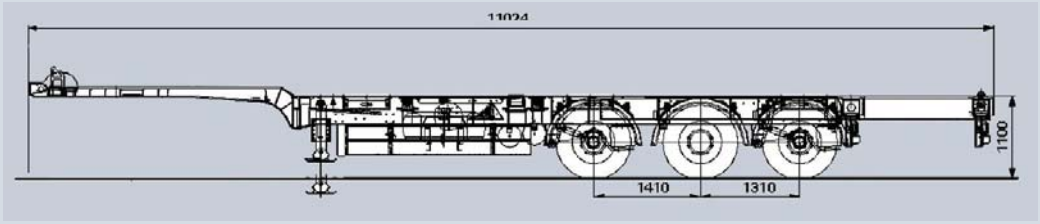
Panel front will be fabricated from 3mm thick stainless steel. Front sheet will be supported by main angle framework. Control Panel cooling / ventilation will be provided as required.

FUEL TANK

Built entirely of 4 mm steel sheet. White painted.
Capacity 2000 liters, with manhole opening at the top, level indication and filling plug.

TRAILER

Single three-axle semitrailer ZORZI made in Italy. Air-spring suspensions, drum. Low-bed, lightweight bare chassis suitable for the application.

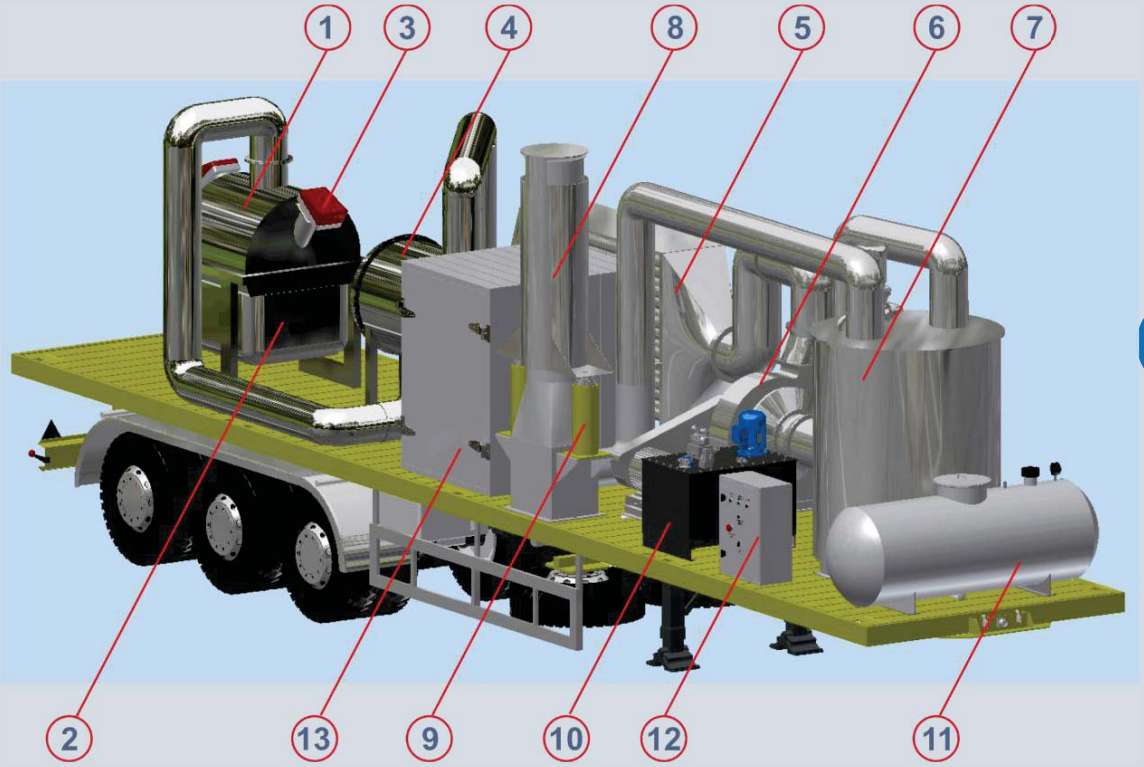


SPARE PARTS

Package includes the supply of spare parts and for 1 Year Normal Operation .

WARRANTY

The warranty covers any system's manufactured defect or malfunction for 12 months, according to the signed Guarantee document.
Spare parts availability 10 years.



1. *MAIN INCINERATOR CHAMBER*
2. *AUTOMATIC LOADER*
3. *BURNER*
4. *AFTER BURNING CHAMBER*
5. *AIR QUENCH*
6. *FAN*
7. *WET SCRUBBER*
8. *EXTENDABLE CHIMNEY*
9. *CHIMNEY'S HYDRAULIC CYLINDER*
10. *HYDRAULIC POWER UNIT*
11. *FUEL TANK*
12. *ELECTRIC PANEL*
13. *FREEZER*

MATERIAL

MAIN FRAME OF INCINERATOR CHAMBER	INOX STEEL AISI 304
MAIN BODY OF INCINERATOR	INOX STEEL AISI 304
EXTERNAL HOUSING	INOX STEEL AISI 304
INSULATION CERAMIC COAT	MAT125 based cast ceramic insulation
REFRACTORY CERAMIC COAT	MgO based cast ceramic 2200°C
POST GAS INCINERATOR	
EXTERNAL HOUSING	INOX STEEL AISI 304
INSULATION CERAMIC COAT	MAT125 based cast ceramic insulation
REFRACTORY CERAMIC COAT	MgO based cast ceramic 2200°C
GAS COOLER GAS/AIR HEATING SYSTEM	INOX STEEL AISI 304
GAS PURIFICATION SCRUBBER	INOX STEEL AISI 304
ACTIVE CARBON FILTER	INOX STEEL AISI 304

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INCINERATION TEMPERATURE	1300°C
FANS CUT OFF TEMPERATURE	150°C

The system complies with European Machinery Directive 37/89/EC and the Waste Incineration Directive 2000/76/EC.