MAKING WATER WORK FOR YOU

PG Series

Charging Door

Loading Mechanism

De-Ashing Door

De-Ashing Chute

I.D. Fan

Venturi Scrubber

Burner

Technical Specifications

Type of Waste	Incinerator Burning Capacity (kg/hr)							
	PGVS30	PGVS40	PGVS50	PYVS75	PYVS100	PYVS200	PYVS300	PYVS400
0	8	12	16	35	50	70	110	125
I	11	17	22	45	70	100	135	170
II	16	25	35	65	85	135	185	230
III	14	23	32	55	65	110	170	250
IV	12	17	22	35	50	55	80	110

Heat recovery system & Auto feeding mechanism versions for the above range are also available. Tailor made systems to suit specific operational requirements. Higher capacity units, in the range of 300 - 1500 kgs/hr. **VS- With Venturi Scrubber**

Applications

Automobiles

Hospitals

FMCG

Paint Industry

Pharmaceutical

Advantages

- Multi-chamber design.
- Totally indigenised design.
- Based on controlled air principle.
- Minimum site work for erection and commissioning.
- Adequate instrumentation for safety and control.
- Technical registration with DGS & D.
- Tested & certified by Central Pollution Control board (CPCB).
- Nationwide network of sales & service franchisees.

We reserve the right to amend any product details without notice

THERMAX

Sustainable Solutions in
Energy & Environment

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Thermax Business Portfolio

- Water & Waste Solutions
- Air Pollution Control
- Chemicals
- Boilers & Heaters
- Absorption Cooling
- Power

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THERMAX

Water & Waste Solutions

INCINERATOR

A complete solution for
Waste Disposal

Improving your business is our business

Thermax offers products, systems and solutions in energy and environment engineering to industrial and commercial establishments around the world. Its business expertise covers heating, cooling, waste heat recovery, captive power, water treatment & recycling, air pollution control & waste management and performance chemicals.

Thermax brings to customers extensive experience in industrial applications and expertise through technology partnerships and strategic alliances.

Operating from its headquarters in Pune (Western India), Thermax has built an international sales & service network spread over South East Asia, Middle East, Africa, Russia, UK and US. It has full fledged ISO 9001:2000 and ISO 14000 accredited manufacturing setup.

Water & Waste Solutions Division

offers expertise in water management recycling. Its water and waste water treatment systems support power plants, oil & gas installations, fertilisers, petrochemicals and others. Its waste management systems serve health and hospitality sectors, townships and colonies.

Destromat Pyrolytic Incinerator

THERMAX, with over two decades of experience and expertise in the field of heat transfer/combustion technology and continuous R & D, presents DESTROMAT PYROLYTIC INCINERATORS specifically designed to treat solid waste of infections & hazardous nature. Based on the principle of three 'T' s viz. Time, Temperature and Turbulence the Incinerators are designed to achieve the desired Destruction & Removal Efficiency (DRE) along with stringent emission norms laid down by the Central Pollution Control Board.

Operating Principle

Primary Chamber : The waste is charged in this chamber through a feeding door. The Incineration of waste is carried out in starved air, known as "Pyrolytic condition". Subsequently, the waste is decomposed into gas containing combustibles and carbonaceous material. The low velocity of gas also helps in minimising carryover of the particulate matter. The temperature is closely controlled between 800^{0}C to 900^{0}C with the help of a burner to ensure efficient combustion of carbon. Sterile ash is removed from the de-ashing door.

Secondary Chamber : The flue gas from the Primary Chamber containing volatiles and unburnts pass to the secondary chamber. Here it is burnt under turbulent conditions and with an additional supply of combustion air.

Complete oxidation is ensured by maintaining temperature above 1000^{0}C with the help of a burner and providing adequate Residence time (minimum 1 second).

Venturi Scrubbing System : The flue gas from the secondary chamber then passes through the downstream Air Pollution Control System. This system is designed to remove particulate matter and acidic pollution present in the flue gas generated during incineration. The system comprises of venturi scrubber, droplet separator followed by an induced draft (ID) fan, all made of corrosion resistant material.

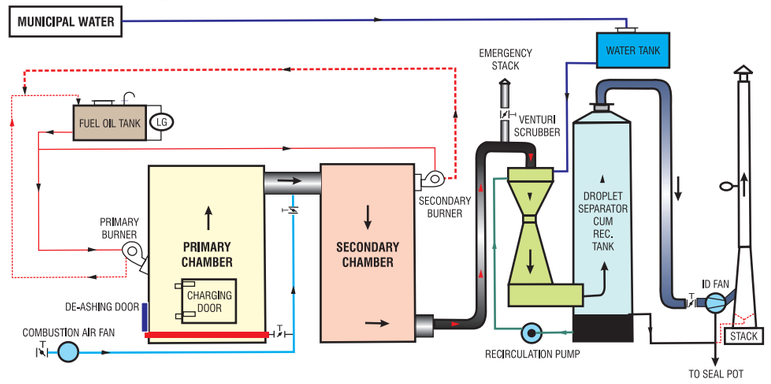
The flue gas from the secondary chamber is cooled to 850^{0}C and ten sent to venturi scrubber. Venturi scrubber is a high energy device where sub micronic particulate matter as well as acidic pollution's are scrubbed. Here, the acidic components are removed by absorption energy. A high pressure drop across the venturi scrubber imparts sufficient energy which helps in atomizing the scrubbing liquid and thus trapping even the minute particulates.

The flue gas then enters tangentially into the droplet separator, which is of cyclonic type. By the action of centrifugal force, the larger droplets presents in the flue gas are removed. This helps in protecting the impeller of the ID fan. The ID fan maintains the negative draft and draws out the clean gas into the atmosphere through a stack.

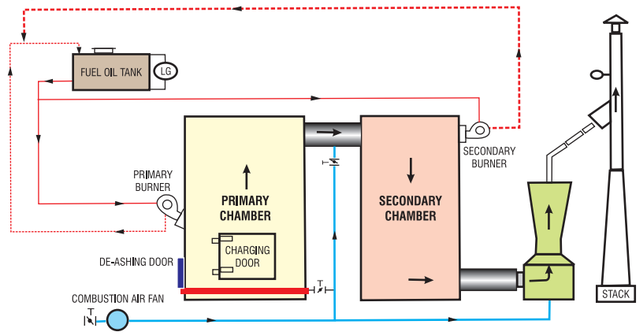
Eductor System : In case of Incinerator with Educator System, the flue gas coming out of secondary chamber above 1000^{0}C enters the Educator Mechanism which brings down the temperature of flue gases to 250-300^{0}C by mixing in the appropriate quantity of ambient air. It also maintains the entire system under negative pressure, thus ensuring safety of operations.

Flow Diagram

Incinerator with Venturi Scrubbing System



Incinerator with Eductor System



Waste Classification as per Incinerator Institute of America

Type of Waste	Nature of Waste	Max. Moisture Content (%)	Calorific Value (Kcal/kg)
0 & I	Highly combustible e.g. Paper, cardboard, wooden boxes, rags etc.	10 - 25	3600 - 4700
II & III	Refuse & garbage from residential source, hotels, hospitals, canteens etc.	50 - 70	1600 - 2400
IV	Pathological waste from research institutes and slaughter houses	85	550