THERMAL PAINT STRIPPING OVENS

Tecflam

burners and thermal machine

Thermal paint stripping ovens

We have been designing and manufacturing pyrolytic stripping ovens for over 25 years.

Our models can be used for various types of metal components:

- **Hooks**
- **Racks**
- **Frames**
- **Grids**
- **Baskets**
- **Production rejects to be recoated**
- **Other similar components**

PROCESS ADVANTAGES

- The process removes any type of coating, regardless of thickness or composition.
- Effective results are achieved even in the most difficult-to-reach internal cavities.
- No solvents or other chemical products are required.
- With an in-house stripping cycle, hook replacement flow becomes much more consistent, resulting in improved coating quality.
- Significantly lower operating costs compared to many other treatment methods.
- Minimal maintenance requirements.

Operating mode

The ovens are equipped with a treatment chamber where the parts to be processed are loaded.

The chamber is heated by the flue gases of an industrial burner up to a maximum temperature of 450 °C.

The pyrolysis gases released during the process are burned in a post-combustion chamber at a temperature of 850 °C. The post-combustion chamber is also equipped with an industrial burner to maintain the required temperature. Inside the post-combustion chamber, combustion occurs with excess air, ensuring at least 6% free oxygen. It is designed to provide a flue gas residence time of 2 seconds, thereby guaranteeing the complete oxidation of volatile organic compounds (VOCs).

DIMENSIONS

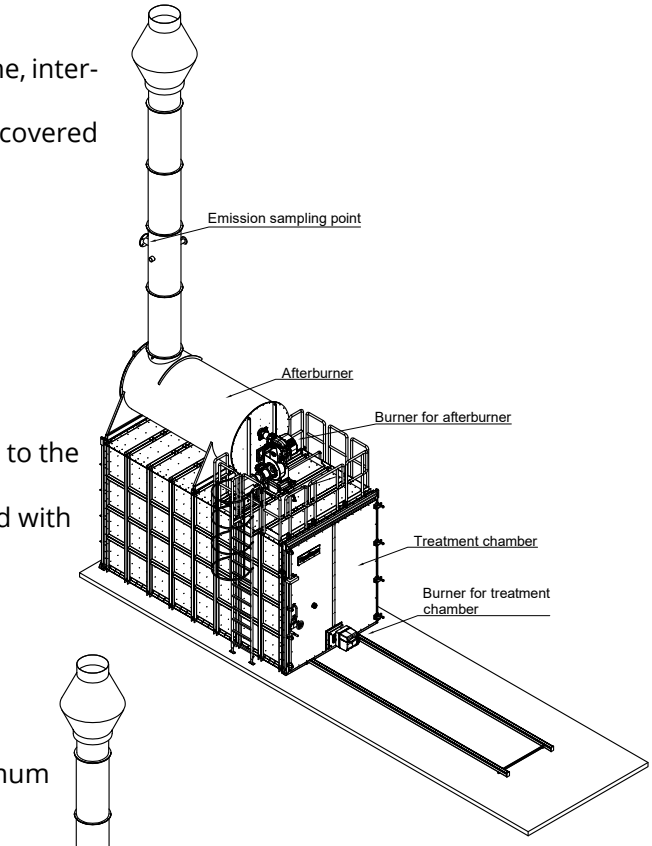
Custom-built solutions can be provided

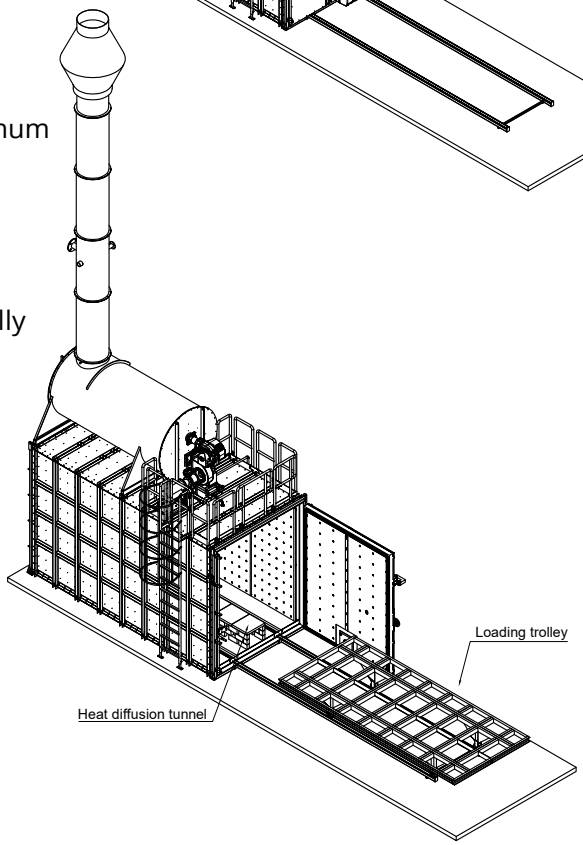
Also available in electric version

MODEL	USABLE LOAD DIMENSIONS			INTERNAL CHAMBER DIMENSIONS			OVERALL DIMENSIONS		
	b	h	l	B	H	L	Be	He	Le
113	1100	1100	1400	1100	1700	1500	1600	2050	2100
114	1100	1100	1900	1100	1700	2000	1600	2050	2600
115	1100	1100	2400	1100	1700	2500	1600	2050	3100
224	1200	1350	1900	1300	1900	2000	1800	2300	2600
225	1200	1350	2400	1300	1900	2500	1800	2300	3100
226	1200	1350	2900	1300	1900	3000	1800	2300	3600
335	1400	1600	2400	1500	2150	2500	2000	2500	3100
336	1400	1600	2900	1500	2150	3000	2000	2500	3600
337	1400	1600	3400	1500	2150	3500	2000	2500	4100
423	1600	2100	1400	1300	2650	1500	1800	3000	2100
434	1600	2100	1900	1500	2650	2000	2000	3000	2600
435	1600	2100	2400	1500	2650	2500	2000	3000	3100
436	1600	2100	2900	1500	2650	3000	2000	3000	3600
446	1600	2100	2900	1700	2650	3000	2200	3000	3600
447	1600	2100	3400	1700	2650	3500	2200	3000	4100
448	1600	2100	3900	1700	2650	4000	2200	3000	4600

Technical features

1. Treatment chamber made of a painted structural steel frame, internally lined with high-temperature insulating materials and covered with stainless steel sheets;
2. Longitudinal heat distribution tunnel positioned inside the chamber, beneath the loading trolley, to ensure improved heat distribution;
3. Separate cylindrical post-combustion chamber, connected to the treatment chamber through a transfer duct internally lined with refractory bricks for extended service life;
4. Industrial burners designed according to specific process requirements;
5. Emergency water spray system for controlling the maximum temperature inside the treatment chamber;
6. Safety limit switch with door interlock;
7. Safety hatch in the treatment chamber that automatically opens in case of internal overpressure;
8. Refractory-lined stack to ensure proper draft;
9. Electrical control and management panel;
10. Loading trolley for parts;
11. Thermocouples for monitoring process temperatures.





Advantages of our Solution

1. Longitudinal heat distribution tunnel ensuring uniform temperature along the entire length of the oven;
2. Water spray system for maximum temperature control in the treatment chamber, PLC-managed with customizable activation parameters;
3. Burners engineered according to specific process requirements to guarantee optimal management in temperature increase stages and improved ventilation during cooling phases;
4. Siemens PLC-based control and management system ensuring long-term reliability and availability of components;
5. Industry 4.0-ready supervision system enabling full remote control of the oven;
6. Protective lining sheets that provide optimal insulation protection and significantly reduce maintenance requirements over time;
7. Cylindrical post-combustion chamber structure for improved mechanical resistance of the refractory lining;
8. Customizable loading trolley designed according to the specific characteristics of the parts to be processed.

Optional Features

To meet specific safety, automation, and sustainability requirements, the oven can be equipped with a range of dedicated optional features:

1. Vertical “guillotine” automated door: optimizes space, allows rapid automated opening, and ensures enhanced safety during operations;
2. Oxygen monitoring system for flue gases: enables precise control of air supplied to the post-combustion chamber, resulting in improved energy efficiency;
3. Ladder and safety railing: solutions for safe access to the oven during maintenance;
4. Automated trolley: for fully automated material handling;
5. Hybrid or fully electric version: sustainable alternatives that reduce emissions and optimize energy consumption;
6. Emission measurement devices;
7. NOx abatement systems;
8. Heat recovery systems for improved energy efficiency.

BEFORE & AFTER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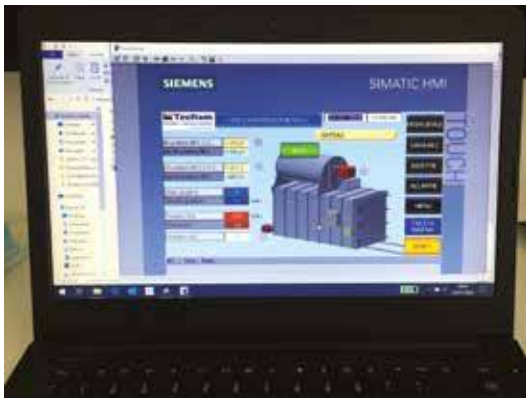
INDUSTRY 4.0

REMOTE ASSISTANCE

CONTINUOUS EVOLUTION

Our ovens are equipped with networked interconnection systems that allow supervision and remote control.



Some advantages of our solution:

- management and control via PLC;
- package complete of hardware and software for implementation;
- secure VPN connection;
- easy to configurate and use;
- ability to receive faster assistance via remote connection;
- simple and intuitive interface between man and machine;
- compliance with the latest safety parameters;
- remote control system;
- continuous monitoring of process conditions.

SERVICE E REVAMPING

Revamping industrial ovens is key to ensuring efficiency, safety, and ongoing reliability in your production.
We carry out refurbishment and/or upgrades of existing pyrolytic ovens to enhance performance and long-term reliability of all components.
Fast interventions minimize production downtime and help optimize your investment.

In addition to our in-house **technical support** team, we provide service through a network of service centers with strong coverage across Europe.

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Company with quality management system according to UNI EN ISO 9001:2015

Company with environmental management system according to UNI EN ISO 14001:2015

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