



Specialized in custom industrial ovens

VERTICAL OVENS



Company know-how

Design and manufacturing of turnkey and **custom industrial ovens**, with conveying and handling solutions for all industrial applications

- **Thermal expertise** up to **650°C (1200°F)**
- **Mechatronic solutions** to load, unload, convey and handle products

Strengths of Elmetherm

- **Complete control of the manufacturing:** mechanical and automation studies, assembling, wiring, testing and set-up in our workshop ; commissioning on site
- **Custom design to match your specifications**
- **Thorough aeraulic study** for every project to guarantee the best **heat homogeneity**, effective drying of water and solvents



Industrial applications

- **Heat treat:** hardening, tempering, annealing, ageing, stabilization
- **Heat control:** preheating, temperature holding, cooling
- **Drying :** water and solvents exhaust
- **Material forming and production:** polymerization, vulcanisation, sealing, gelation
- **Food industry:** baking, dehydration, sterilisation, pasteurisation, roasting

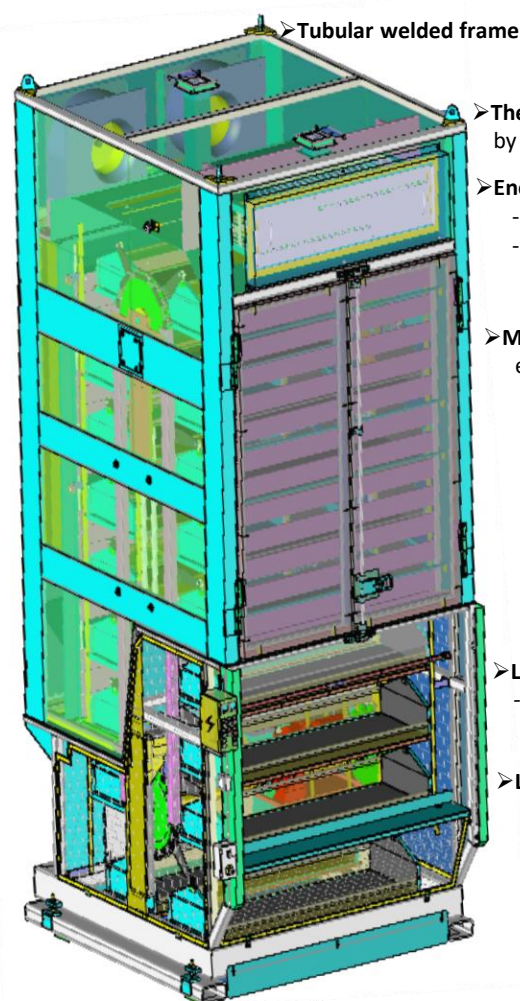


The pros:

- ✓ **Compact, single-block** construction;
- ✓ **Economical and performant** conception;
- ✓ **Reduced footprint**;
- ✓ **Convient and easy integration** in existing production lines;
- ✓ **Accessibility** et mobility
- ✓ **Numerous industrial applications.**

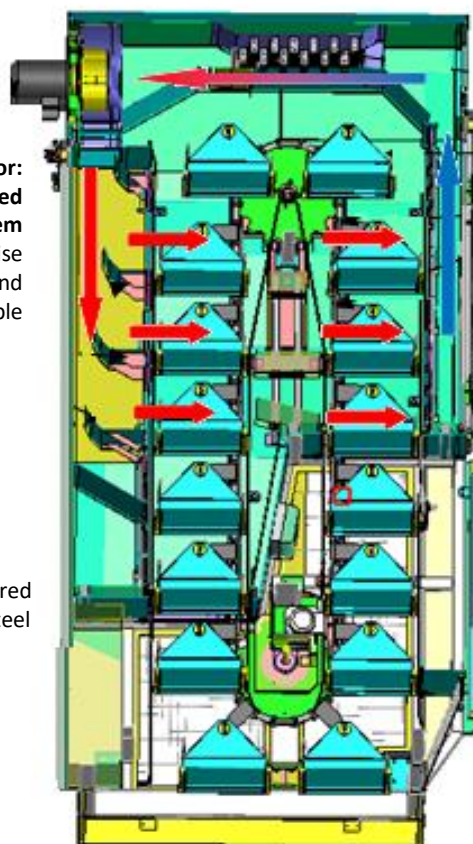


Industrial oven integrating a **vertical conveyor**: the **parts** are placed on **swing trays**, fixed on chains and moving according the pattern of **Paternoster**.



- **Tubular welded frame**
- **Thermal insulation** by layers of rock wool.
- **Energy:**
 - electrical resistances rack
 - gas, battery
- **Maintenance doors** easy access
- **Vertical conveyor:** gear motorized chain system
 - precise and reliable
- **Loading/ Unloading** - manual/ robot/ etc.
- **Light barrier** (security)
- **Interior covered** aluminized steel

- **Heating system:** convected heated air



- **Fans:**
 - recirculation
 - extraction hot air
- **Electr. cabinet**
- **Uniform temperature distribution:**
 - custom air distribution studies
 - ajustable louvers
- **Temperature control:**
 - ramps
 - soak
- **Distinct heating and cooling zones.**
- **Support:** custom swing trays

Paternoster-Oven: dimensions

Total length	Total height	Total width,	Nbr of swing trays	Length swing tray	Width swing tray	Weight
mm	mm	mm	mm	mm	mm	t
2 300	4 450	1 900	22	600	500	< 3
2 500	4 800	1 400	18	800	500	< 3
2 600	4 800	1 600	18	1 000	500	< 4
2 600	5 000	2 300	18	1 200	500	> 4
2 600	5 000	2 300	18	1 600	500	> 4
5 600	4 700	2 700	22	2 600	640	> 10

Conditions of Use

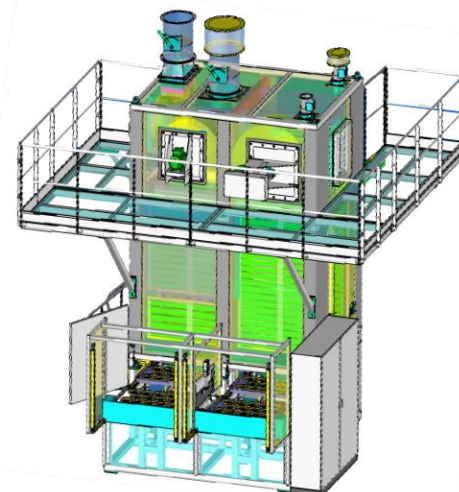
- Max. temperature : < 250 °C

The pros:

- ✓ **Compact, monobloc** construction ;
- ✓ **Economical, performant** conception;
- ✓ **Reduced footprint**;
- ✓ **No mechanization** freed of gears and chains:
 - extended temperature range
 - no lubrication.
- ✓ **Numerous industrial applications.**

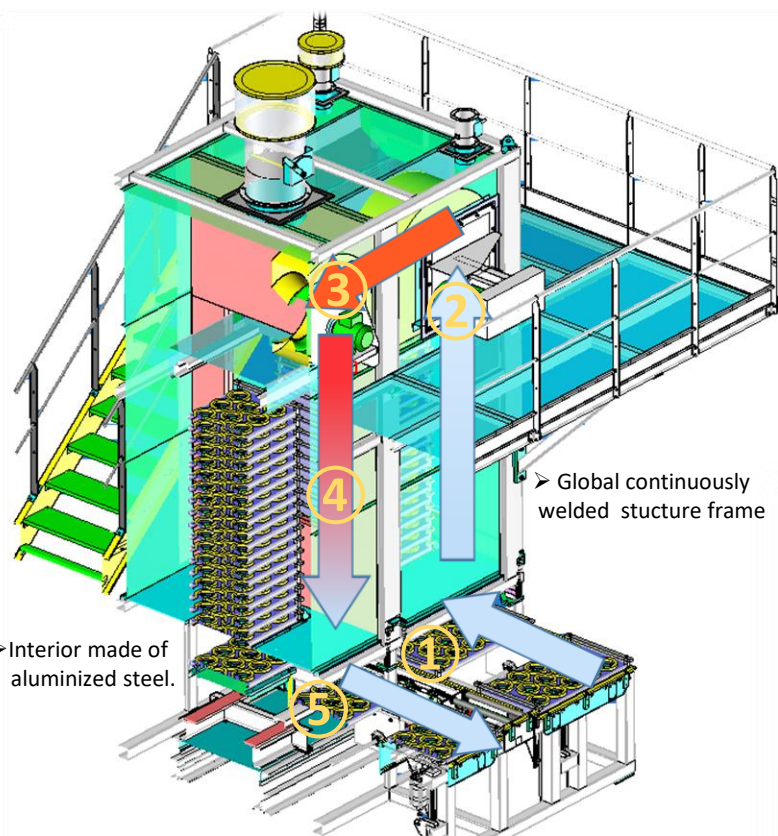
Vertical Trays Oven:

workparts are deposited on trays. **Stack of trays** are moved vertically.



Conditions utilisation

- Température maxi. : <350 °C

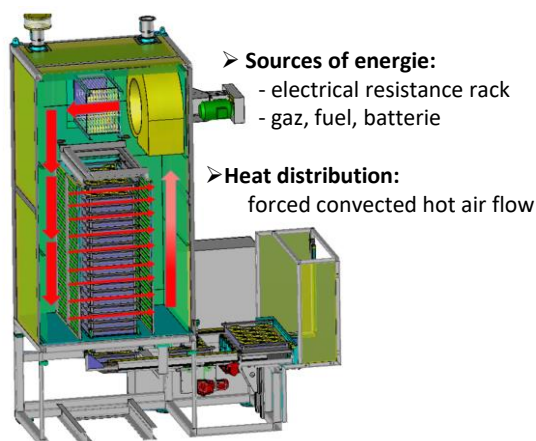


➤ Maintenance platform.

➤ Global continuously welded structure frame

➤ Interior made of aluminized steel.

- 1 Horizontal conveying to/ from the oven.
- 2 Lifting table: piling and vertical conveying (ascending trays)
- 3 Horizontal transfer: change of trays stack
- 4 Lifting table: unstacking and vertical conveying (descending trays)
- 5 Horizontal conveying for unloading

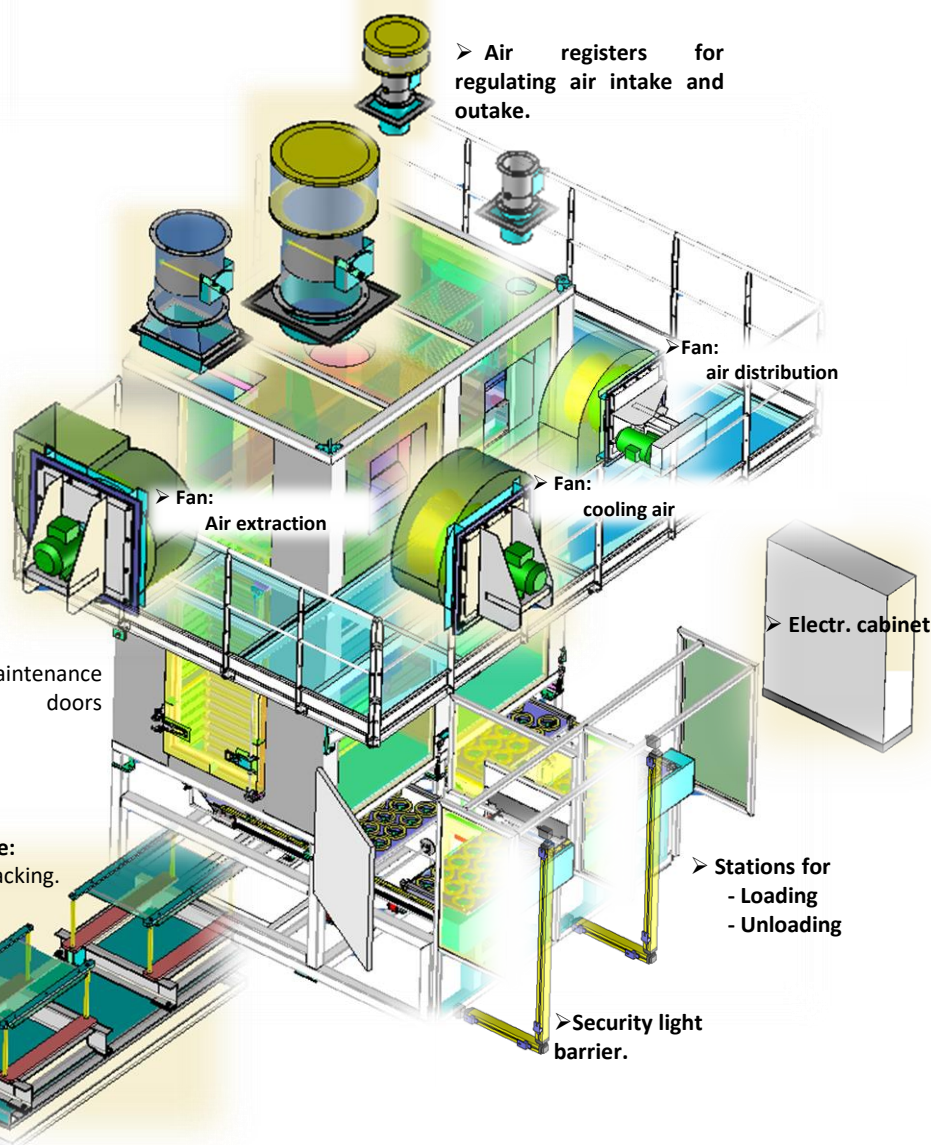


➤ Sources of energie:

- electrical resistance rack
- gaz, fuel, batterie

➤ Heat distribution:

forced convected hot air flow



➤ Air registers for regulating air intake and outake.

Fan: air distribution

Fan: cooling air

Fan: Air extraction

➤ Maintenance doors

➤ Lifting table: - trays stacking.

➤ Stations for - Loading - Unloading

➤ Security light barrier.

➤ Electr. cabinet

The pros:

- ✓ Oven incl. advantages of a **horizontal conveyor oven**
- ✓ **Low footprint;**
- ✓ **Easy and convenient** in a continuous production line
- ✓ **Numerous applications** in the industry.

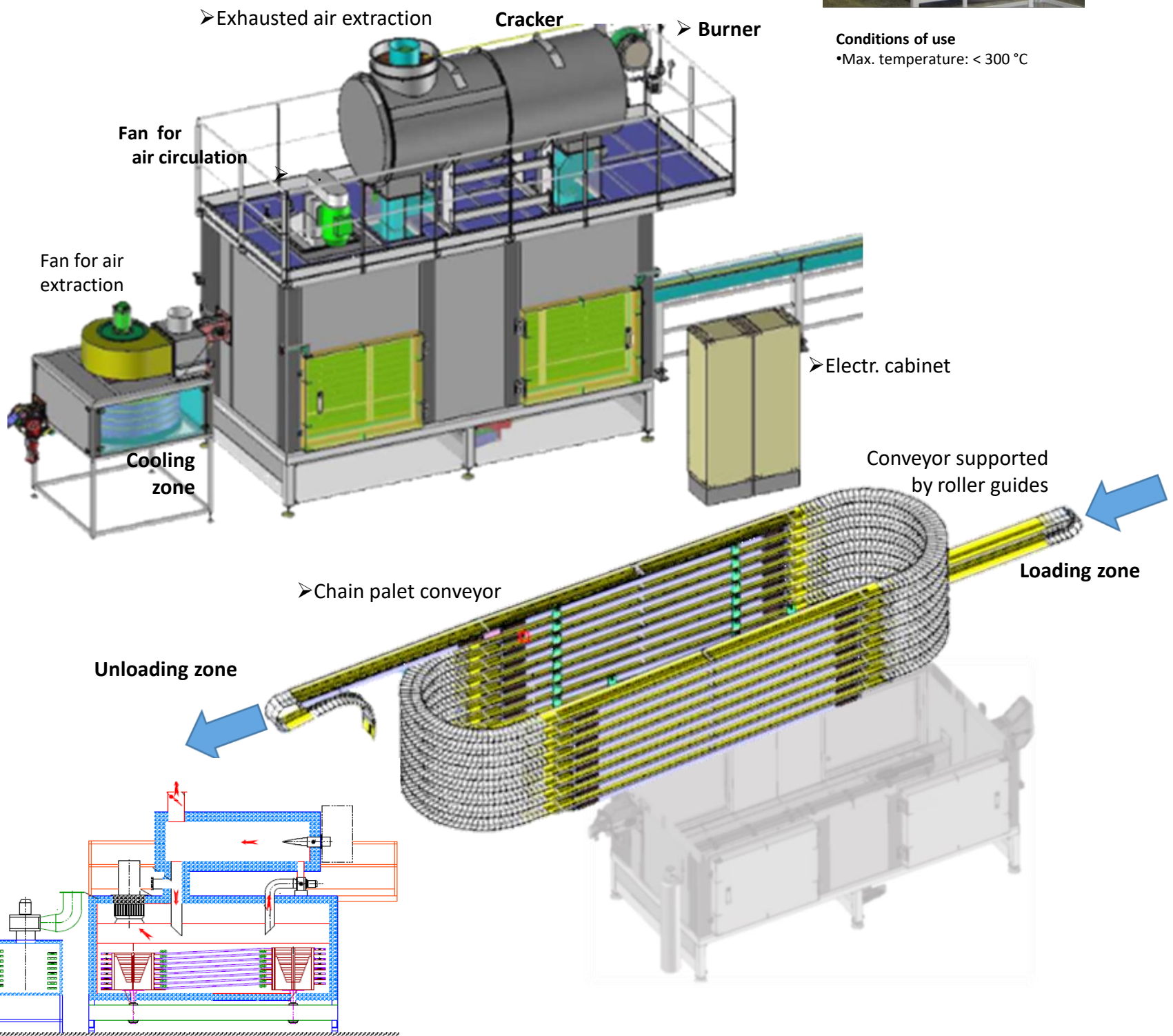
Spiral Oven:

A horizontal, helocoidal conveyor transports the parts on different levels of the oven.



Conditions of use

- Max. temperature: < 300 °C



The pros:

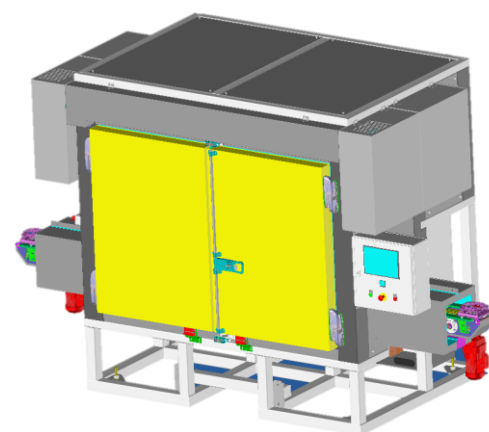
- ✓ Compact, monobloc construction;
- ✓ Economical and performant conception;
- ✓ Low footprint;
- ✓ Quick and continuous transfer;
- ✓ Implemented customer's trays; continuous process
- ✓ Numerous applications.

Vertical conveyor oven:

Two chain conveyor equipped with steel corners take in charge the parts deposited on customer's trays.

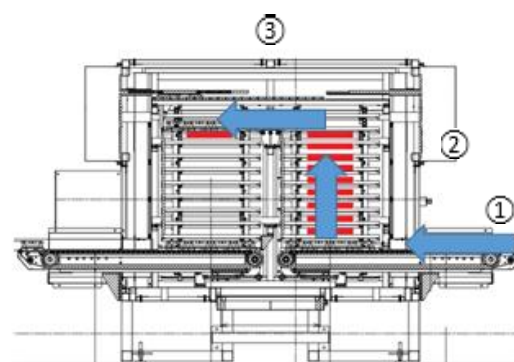
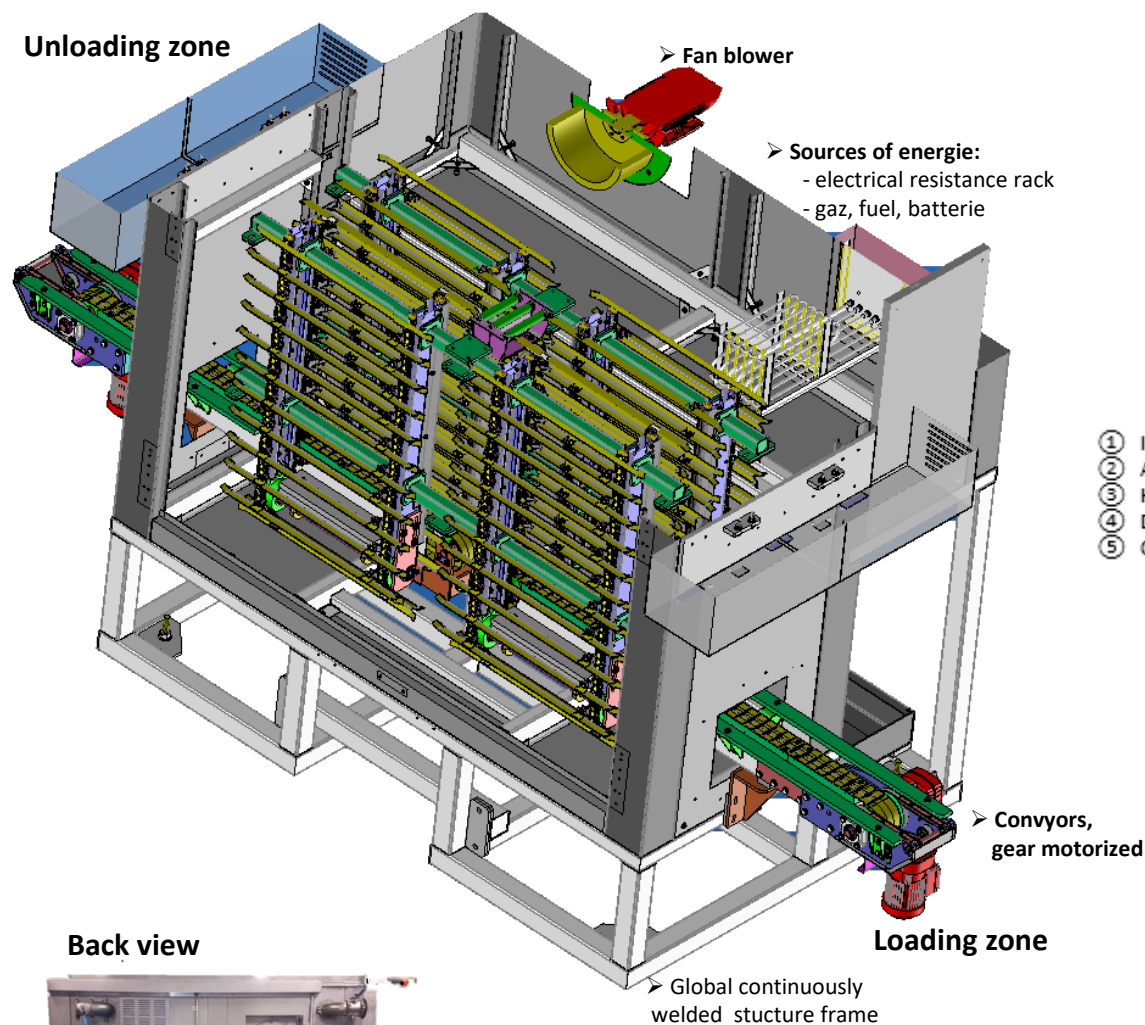
One chain conveyor transfers the trays to the top of the oven; the second chain conveyor transfers the trays to the bottom.

Change of conveyor via pneumatic horizontal transfer.

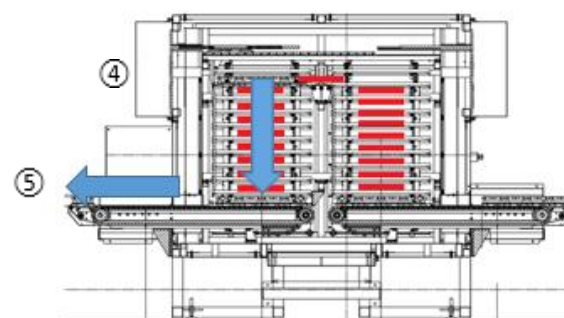
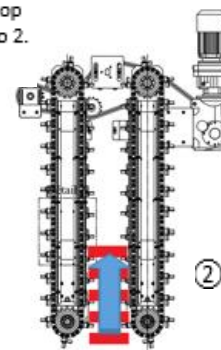


Max. temperature of use
• Temperature maxi. : < 300 °C

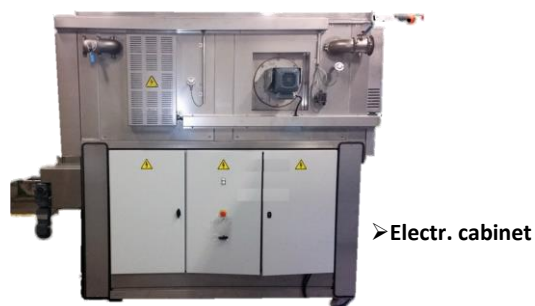
Unloading zone



- ① Inlet conveying
- ② Accumulation and lifting up.
- ③ Horizontal transfer on the top
- ④ Descending simultaneous to 2.
- ⑤ Outlet conveying



Back view





For over 40 years, Elmetherm realizes industrial furnaces for a variety of industrial applications:

Car industry

Aeronautics

Steel & Aluminium industry

Space and military
industry

Food industry

Raw materials industry



*The specialist for custom
industrial oven solutions*

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