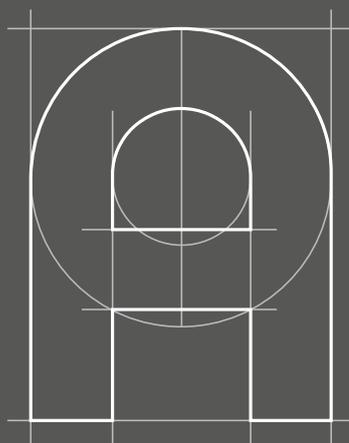
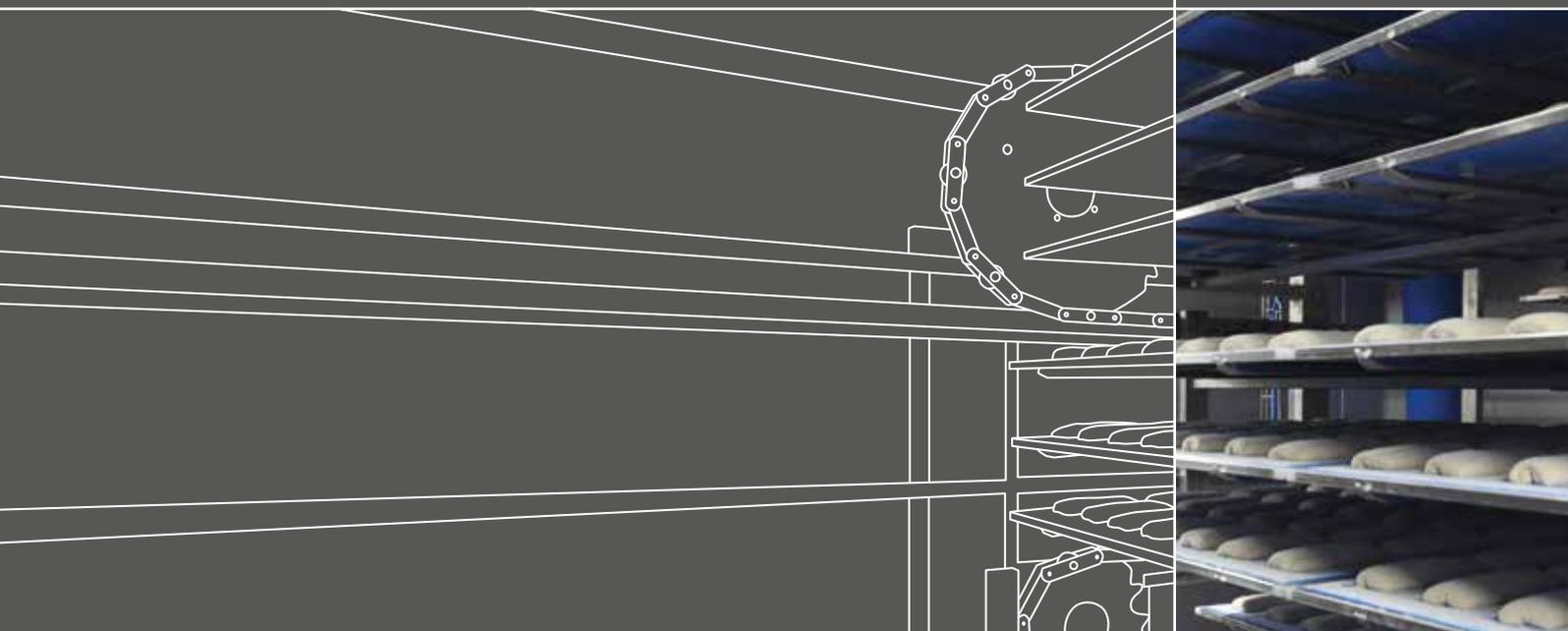


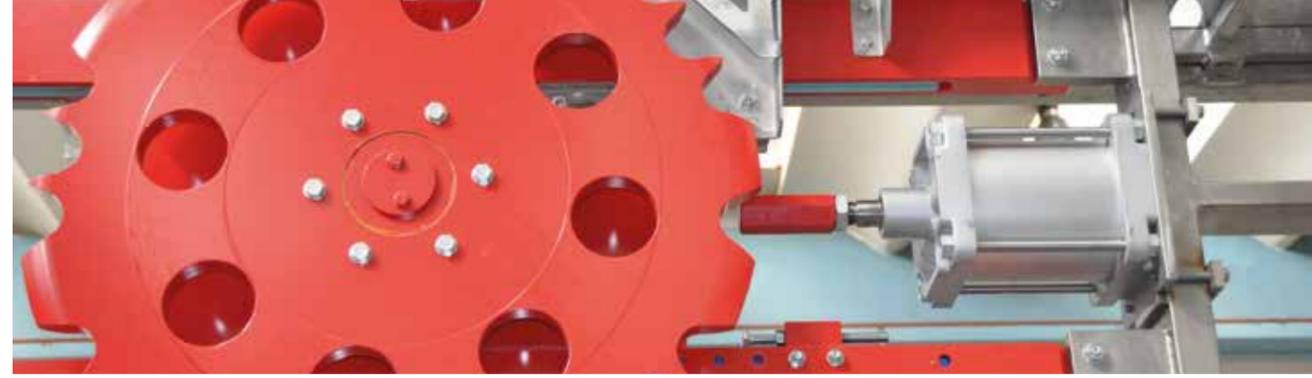
ALITECH
industrial baking systems



AUTOMATIC GRAVITY TRAY-CARRIER PROOFERS



Made in Italy 



GRAVITY TRAY PROOFERS (RAKE TYPE)

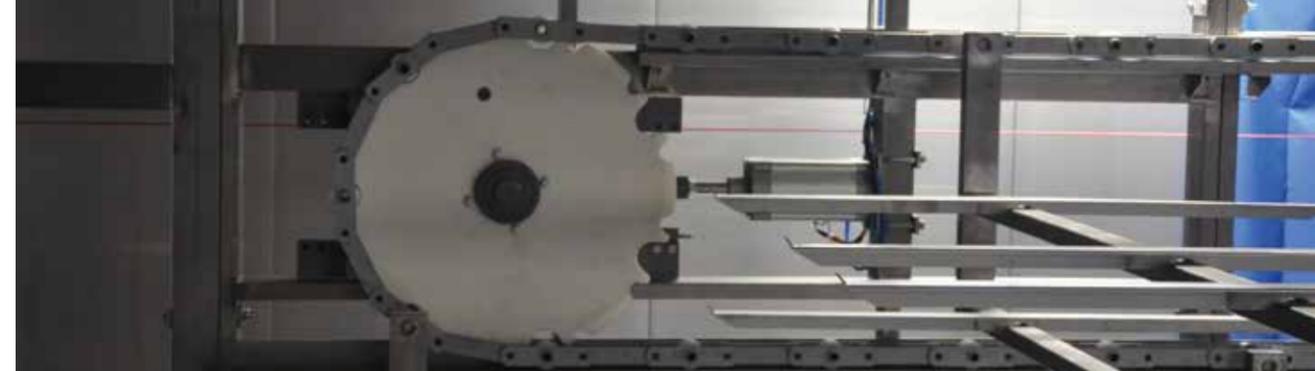
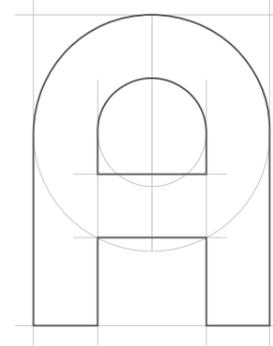
Alitech produces and assembles in his own premises, which is fully equipped for all the manufacturing phases.

The production area is around 6.500 sqm, the surface of the technical and administrative offices is around 800 sqm. Most of our machines are pre- assembled in our premises before shipment. Installation at the customer premises is executed by our skilled staff. The supervision software is also designed internally by Alitech.

The automatic proofer is the perfect complement of the tunnel oven.
Alitech manufactures **many types of proofers with different features**, depending on the type of process and on the available space. There are no standard proofers, the only **standards** are features like: **the accessibility for the maintenance, the hygiene, the measuring and control of the process parameters, the constancy of the proofing conditions.**

In the last years a lot of time has been dedicated to the further sophistication of our proofers in both aspects: technical project and materials' choice.





STRUCTURE

The proofers are made of stainless steel pipes: once welded they are pre-assembled and mechanically tested. All the weldings are clean. To make cleaning and maintenance operations easier all the proofers are provided with internal side corridors, on the ground and overhead, with access doors on both sides.

The conditioning unit is located on a platform, which is accessible by means of a stairway. The proofer's feet are made of stainless steel and are self-levelling. To avoid accumulation of dirt between the proofer's structure and the isolation panels, there is an open space between them. The Proofer insulation panels stand on the ground or, in case of "L" proofer, on the overhead platform.

The same type of proofer can have different shapes, basically they are:

- **Overhead shape (L shape):** this shape allows to free the floor space underneath the proofer in order to accommodate the oven or other equipments, it is the most used, the only limit is the ceiling height;
- **Overhead shape (T shape):** this shape allows to distribute the overhead space on both sides from the Proofer floor base, it is used when there is no possibility to adopt the "L" version; the only limit is the ceiling height;
- **Box shape:** classical box shape, usually provided with a cross-tunnel for lateral crossing.

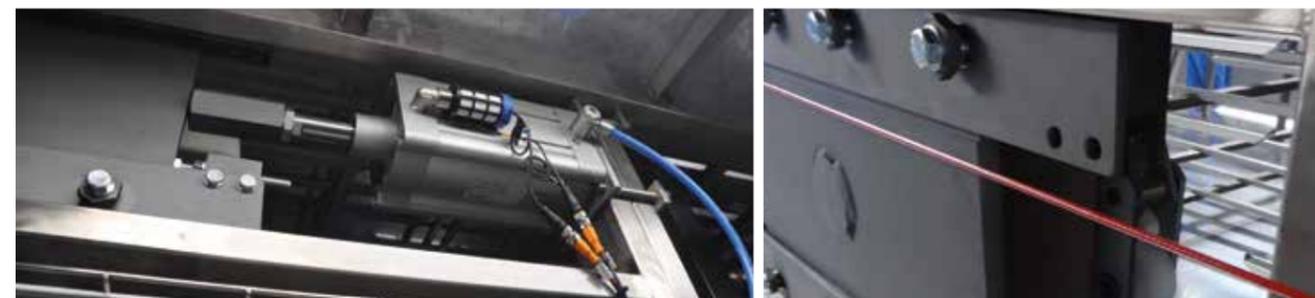
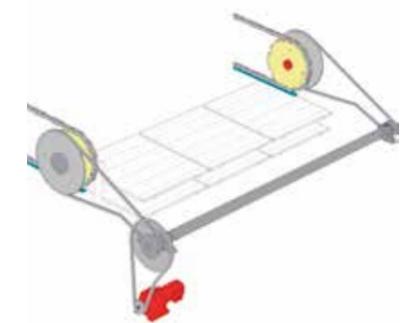


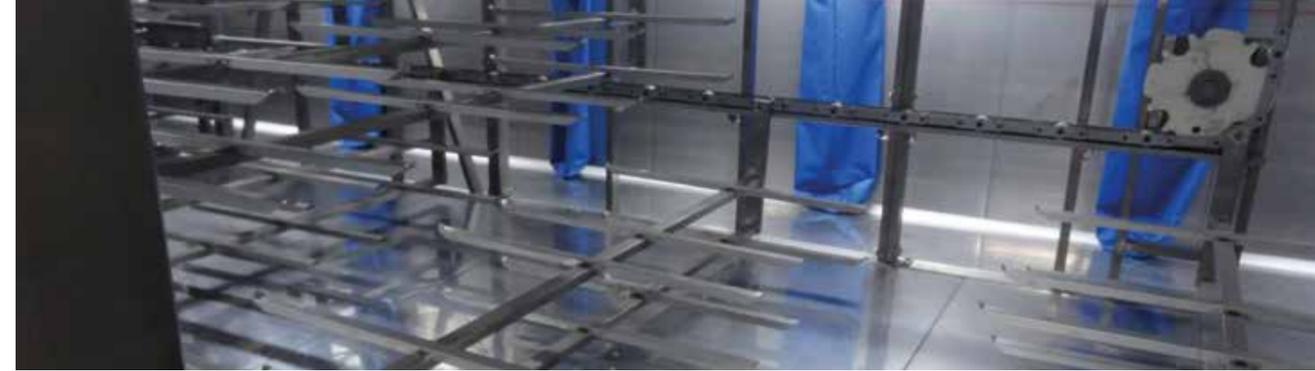
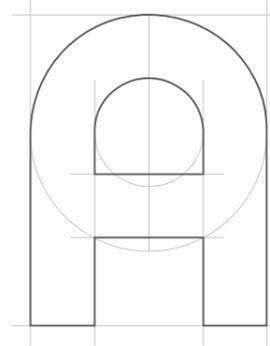
PRODUCT CONVEYING SYSTEM

Is the mechanical "heart" of the proofer and it is essential to guarantee the correct and reliable operation of the proofer during the years.

It includes:

- **The chain driving system** which consists of a gear box under frequency inverter connected to a driving shaft with wheels which transmits the movement to the 2 sections of the chain on both sides of the proofer and at the same time. In case of big proofers the driving system can be split. Besides the split driving system, very big proofers are provided with more driving motors electronically connected.
- **The chain**, that gets motion from the driving system and moves the trays in the proofer. The chain is provided with bearings in correspondence with the trays' connection pins. Oil free chains can be used to avoid contaminations: this has drastically improved the hygiene conditions inside the proofer. In the horizontal sections the chain runs on a PE guide.
- **The wheels** around which the chain runs: they can be made of hardened steel or PE. The plate on which they are fixed is adjustable in order to center the two chain's sections. The wheels do not need lubrication.
- **The chain tensioning plates:** these are activated by pneumatic cylinders when the proofer is switched on, when the proofer is switched off, the cylinders' pressure is released to take off the tension from the chain. This results in a longer life time of the chain and system control. The correct tensioning is guaranteed by sensors, positioned on the cylinder's rod: they feel when the chain is too much elongated.





PRODUCT CONVEYING SUPPORT

The type of product conveying support consists of a **tray carrier (rake type) with 2 or 3 levels.**

Different designs of the Tray carrier allow to accommodate boards, pans, tins. The stainless steel Tray carrier is fixed on both sides to the chain by means of pins in correspondence with the chain's bearings: these pins can be easily removed to take off the tray.



AIR CONDITIONING, AIR DISTRIBUTION AND ISOLATION

The control and the consistency of the proofing conditions, like air temperature, humidity and air speed, are essential to obtain an uniform proofing. Alitech supplies **the conditioning unit with the air conveying and return system (ducting)**, designed to obtain what is required by the final product technology.

The conditioning unit is controlled by a PLC with indication of the set and actual values. **Air distribution sleeves made of antibacterial inflatable fabric** are used inside the proofer, they can be easily removed and washed.

The proofer's **insulation is made of sandwich type panels with both faces in stainless steel**; the panels are self-carrying and arrive to the ground being slightly separated from the proofer frame to avoid dirt accumulation.

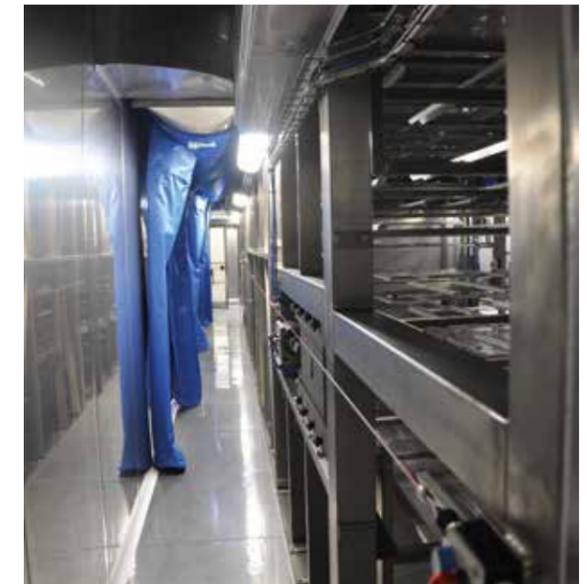


MAINTENANCE, ACCESSIBILITY, HYGIENE

Although the different proofer types have different specifications what they have in common is the **possibility to easily access to all the points inside the proofer that need maintenance or control.**

The proofers are fitted with side corridors between the external panels and the frame, the corridors are at ground level and at the overhead part of the proofer, they are lighted by neon lamps and are served by access doors.

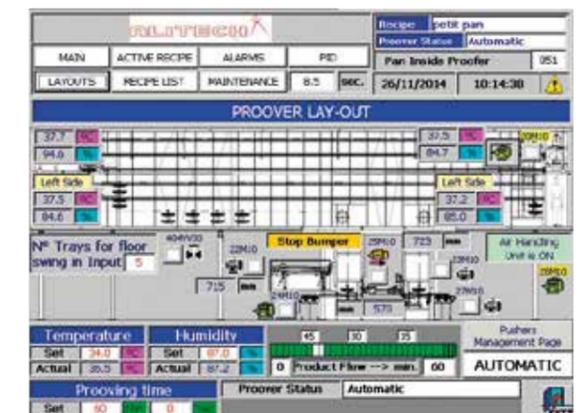
The product carriers that travel inside the proofer are also accessible and are kept high from the floor to facilitate cleaning operations. In case of chains with oil, the lubrication can be scheduled by means of a distribution pump. The bearings of the toothed wheels are lubrication-free.

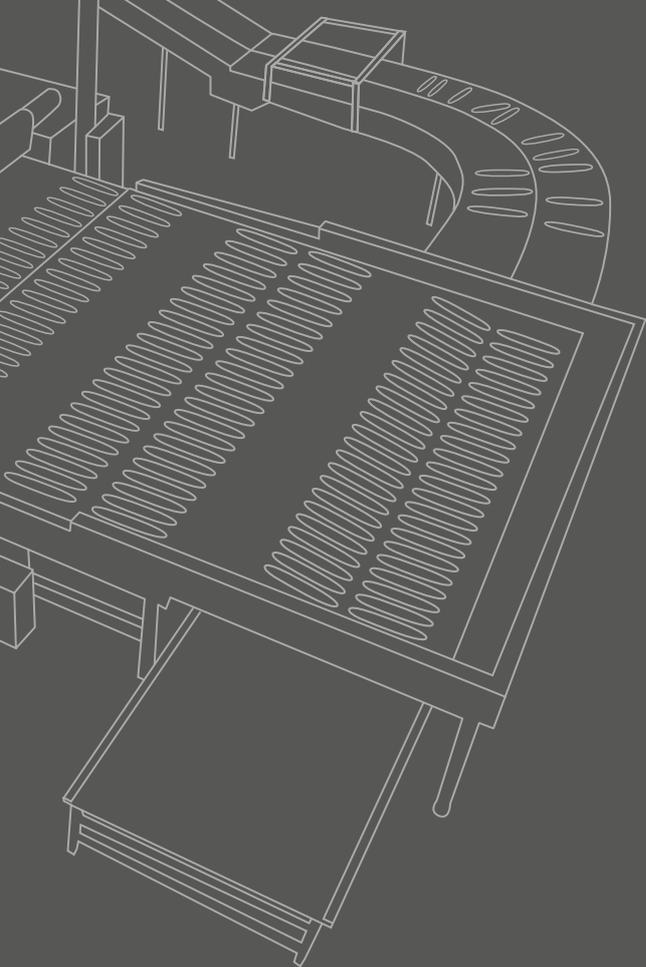


CONTROLS

The operating system is designed like a graphic representation of the proofer with set-points, alarms and status of the different parameters, the information on the panel that are available to the operator and to the plant management can be increased to supply, for example, scheduled maintenance tables, productivity and energetic efficiency diagrams and coefficients.

Our aim is to present to the supervisor all the main parameters to manage and control the line reducing in the same time the human presence on the machine side as much as possible.





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