



MINIPAN[®]

**RAFFINATORE
PUNCH
& FOLD
SHEET
GENERATOR**



MORE THAN 60 YEARS OF HONORED SERVICE...

The very first RAFFINATORE came as a solution to a problem. Northern Italian bakers were seeking a device able to support their fork mixers for kneading their dough, made with the local low protein flour, and to help the development of the right gluten network. Like their fork mixers, it had to be gentle enough to reduce friction, therefore capable of controlling dough temperature increases.

MINIPAN's engineers studied what master bakers were doing by hand, pressing and stretching dough with the heel of the hand, folding over, and rotating it through 90° repeatedly, until the dough become elastic and smooth, and designed the very first RAFFINATORE, a closed loop dough breaker, able to mimic the manual process. This machine drastically reset the human effort required to finish a dough sheet, providing always an extremely consistent and effective result.

It is no secret why RAFFINATORE instantly became MINIPAN's best seller, driving the growth and success of the company.

... AND STILL KICKING!

Ever since, we have been developing the RAFFINATORE technology and evolved it into a futuristic concept. The demand for hand made looking breads is nowadays growing bigger and bigger and RAFFINATORE, despite its heavy duty industrial built, has kept unchanged its unique amazing capability to improve the gluten network in respect of a traditional method.



Mr. Bruno Zaffagnini, production manager. Minipan member since 1976





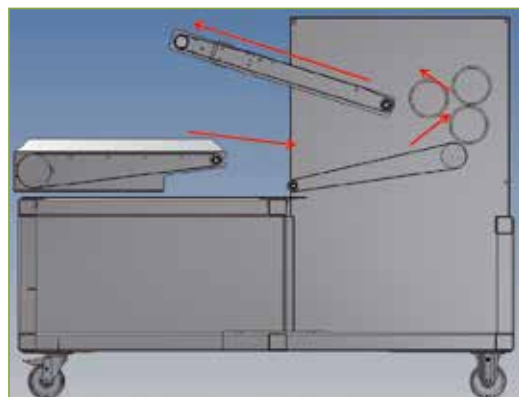
HOW IT WORKS

ADVANTAGES

RAFFINATORE works in a way as simple as smart and effective: a chunk of mixed dough (max 35Kg.) is introduced through the 4 rollers head to gauge it down while stretching it. The dough sheet achieved is then folded over and rotated 90° with an automated turntable.

This cycle can be repeated as many times as a specific bread recipe requires, in order achieving the crumb texture desired.

- Improvement of the gluten network, while elongating its fibers
- Improvement of the air cell consistency and distribution in the crumb (i.e. avoiding nasty holes in the crumb of the sandwich bread)
- Mixing time reduction
- Very limited dough temperature increase, thanks to its low-friction gentle process
- Respect of the traditional dough generation method, to achieve clean label breads



STUDIES AND RESEARCHES

In the attempt to fully understand the impact of RAFFINATORE in a bread dough make-up process, MINIPAN, in cooperation with the University of Bologna, supported a scientific research. Two pieces of dough were picked out from the same mixed batch, one has been kneaded through the RAFFINATORE machine before being formed into a bread shape by a rounder while the other one has been loaded into the same rounder as it was, directly from the mixing bowl.

The conclusions of the study are unequivocal. RAFFINATORE improves the bread structure, homogenizing the air cells distribution inside the crumb, increasing their total number, while decreasing their overall dimension (below 1mm).

Using an Electron Microscope (SEM) to analyze several bread samples, the scientists proved that multiple process cycles through the RAFFINATORE machine improve the development of protein chains in the crumb, to obtain an isotropic gluten matrix.

In other words, RAFFINATORE consents to achieve better bread, even using lower protein flour and avoiding chemical aids.





RAFFINATORE

Since 1957, RAFFINATORE has satisfied the most demanding bakers and helped them to achieve better products with less effort. Breadsticks, taralli, tin bread, sandwich bread, rusks, bisnaguinha, hallula, hot-dog bread, hamburger rolls, these are just a few examples of products that improve when processed with RAFFINATORE.

The self-standing RAFFINATORE is perfect for a small bakery or an R&D department. The dough can be charged directly from the mixer and get refined as many times as the recipe requires.



RAFFINATORE

FEEDING AUTOMATION AND CUTTING TABLE



Moreover, scaling up tradition to an industrial level, RAFFINATORE can be fully automated and integrated into a heavy-duty production line. A wide range of automated dough chunkers, with customizable hopper capacity, makes the feeding procedure safe, consistent and effortless. Last but not least, even though the RAFFINATORE has been designed for hard doughs, it can be equipped with flour dusters for stickier recipes.

Born as a self-standing machine, RAFFINATORE can be equipped with a cutting table to automatically cut stripes of the desired width.



Bread snacks taralli



Rounded buns

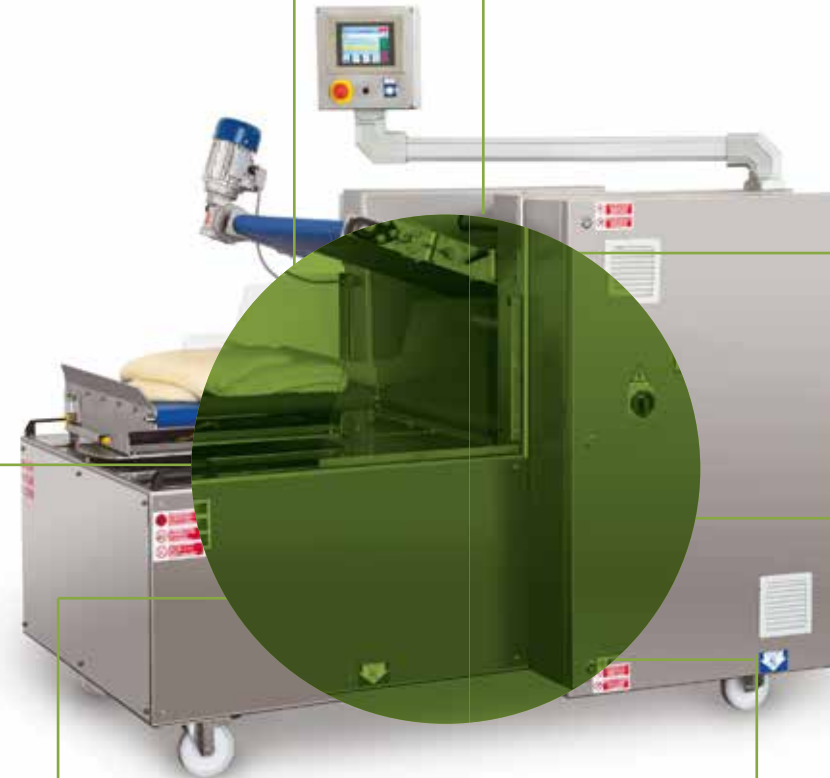


Moulded bread

ONE SHEET GENERATOR, MANY POSSIBILITIES

Travelling all around the world we have discovered that many traditional products feature a cross lamination stage in their sheet preparation method: from Italian tigelle flat bread to Venetian crustless sandwich bread, from Brazilian bisguinha to Chilean hallulla passing through Cuban water crackers, just to mention some.

Among MINIPAN's different sheet generation technologies, RAFFINATORE is certainly the most respectful machine to process medium hydrated dough and it can be coupled with several different make up lines, granting the highest flexibility.



Tin bread



Fried snacks



Rounded rolls



Bread snacks breadsticks, thins, croutons, artisan crackers



MULTIPURPOSE LINE FOR SPECIALITY BREAD



Used as a sheet generator, the RAFFINATORE can be the perfect start for a lot of products.

The MULTIPURPOSE LINE FOR SPECIALITY BREADS combines the amazing performances of our sheeting technologies with the great flexibility of forming solutions.

Moulded breads, hot-dog rolls and hamburger buns, just to mention the most common products, in just one line.



MULTIPURPOSE



MOULDED
BREAD
LINE





TIN
BREAD
LINE







Grissini



Moulded bread



Hot-dogs rolls



Bread snacks



Tin bread



Hamburger buns



Cut shapes bread



Sandwich bread, toast bread, rusks



MINIPAN®

THERE IS NOTHING MINI
ABOUT WHAT WE DO®

MINIPAN® s.r.l.
via Castelletto, 11/C - 48024 Massa Lombarda (Ra) - Italy
tel: +39.0545.971593 - fax: +39.0545.971595
e-mail: minipan@minipan.com
web: www.minipan.com

Keep in touch

