

AUTOMATIC GROUPS

In a bakery, an automatic group is made up of a volumetric divider, an intermediate proofer, and a moulder. Unlike a manual or semi-automatic group, the intermediate steps of transferring dough from one module to another are performed automatically.

An automatic group is crucial for bakeries seeking to increase their productivity while maintaining high standards of quality and consistency in their products.

The bakery sector has increasingly diversified in recent years (in terms of breads, ingredients, processes, distribution channels, etc.). As a specialist in dough mechanization (dividing, resting, rounding, moulding) MERAND has adapted to meet various needs to stay close to customer expectations. To this end, MERAND offers a wide range of automatic groups.

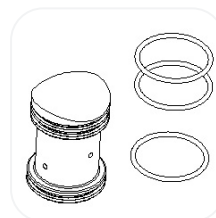


LOFTY VOLUMETRIC DIVIDER



Stainless steel casing

- More hygienic, prevents rust even if the machine is hit by a cart.



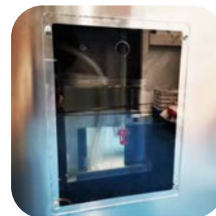
Triple seal on piston

- Prevents air leaks, thus ensuring consistent weight accuracy.



Stainless steel hopper with teflon coating

- Ensures the hopper's longevity and smooth dough flow.



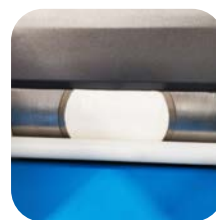
Advanced lubrication system

- Oil reduces friction and wear on parts over time.
- Closed circuit with recycled used oil.



Piston with anti-rebound system (in open hopper)

- Prevents dough from rising back into the hopper.
- Ensures better dough handling and precise weight accuracy.



Stainless steel drum

- No risk of chipping.



Up to 2400 pieces per hour

- Reinforced components withstand high production rates over time.



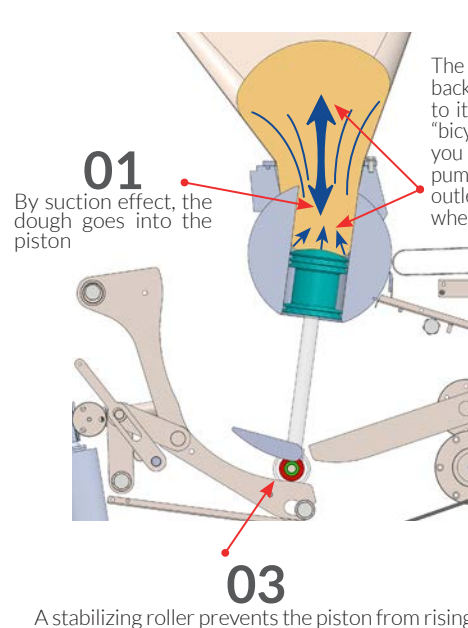
Electric weight and speed adjustment

- More ergonomic, faster, and precise than a steering wheel.

OPEN HOPPER VS PRESSURE HOPPER

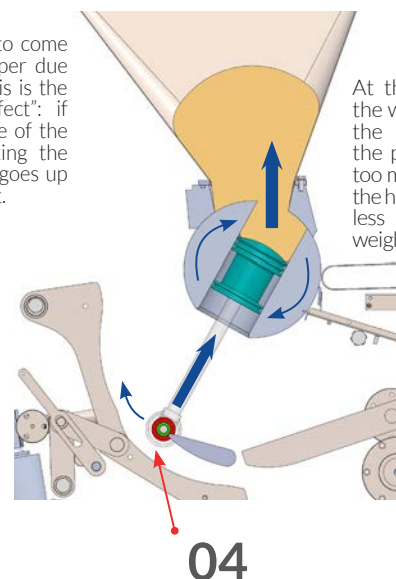


OPEN HOPPER



02

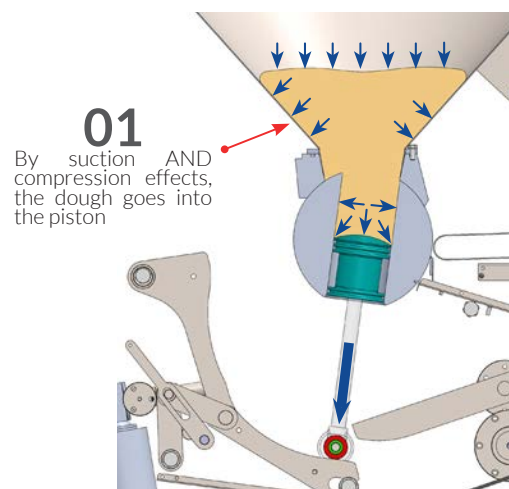
The dough tends to come back into the hopper due to its elasticity. This is the "bicycle pump effect": if you pull the handle of the pump while blocking the outlet, the handle goes up when you release it.



In an open hopper, the dough is «expanded» and less dense.

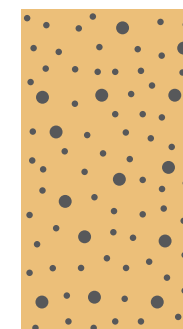
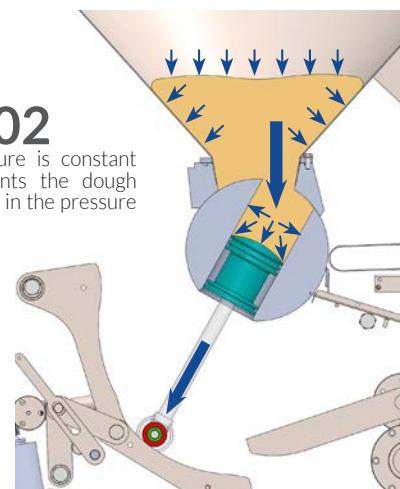


PRESSURE HOPPER



02

The pressure is constant and prevents the dough from rising in the pressure hopper.



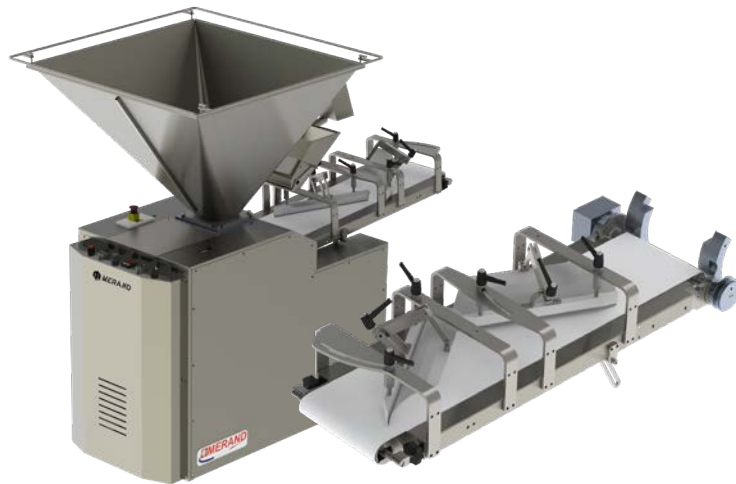
In a pressure hopper, the dough is «compressed», which leaves less chance of having a random filling of the chamber, and increases the precision of divided weights. The dough will expand again at the piston outlet to regain its structure.

PRE-ROUNDING VS PRE-STRETCHING

After dividing, it's important to strengthen the dough so that the bread develops well during baking. Additionally, the dough pieces need to have a regular shape to facilitate their automatic loading into the intermediate proofer. There are two solutions:

PRE-ROUNDING - PRE-ROUNDING TILE

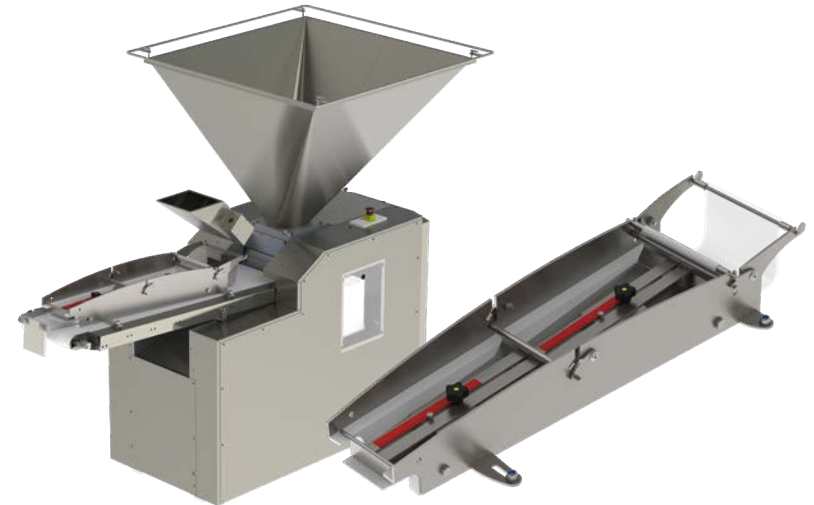
- Easier to center dough balls in the intermediate proofer pockets
- More cost-effective loading system
- Ideal for short breads, less suitable for long breads



Pre-rounding tile

PRE-STRETCHING - MF2S SYSTEM

- Aligns properly the dough gluten network for better stretching in the moulder
- Stretches dough without tearing
- More regular aspect
- Reduces manual adjustments after moulding



MF2S system

STATIC REST VS DYNAMIC REST

STATIC

PRINCIPLE :

All dough pieces are loaded simultaneously into the frame. The dough pieces remain in the same pocket for the entire rest period.

ADVANTAGES :

- Better resting of the dough, making it easier to stretch it in the moulder without tearing.
- Possibility to place the moulder inside the intermediate proofer to save space.
- The «V» loader can hold in both round and pre-stretched dough pieces.



BMF intermediate proofer

DYNAMIC

PRINCIPLE :

Only the pocket at the end of the frame is loaded. The dough piece moves to a different pocket each cycle until the final exit.

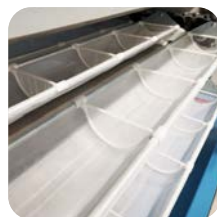
ADVANTAGES :

- Strengthens the dough during turnovers, suitable for breads with tight crumbs and short breads (sandwich breads, breads in mold, etc.).
- Less expensive due to a simpler loading system.



Dynaproof intermediate proofer

BMF AUTOMATIC INTERMEDIATE PROOFER CHARACTERISTICS



Nyltex double-layered gutters without velcro

- Highly resistant, designed by MERAND.
- Its very fine mesh allows the dough to breathe, thus avoiding any sticking
- Air circulation makes the gutters dry very quickly.
- Washable in a washing machine.
- A single sleeve that slips easily into the removable frame.
- No velcro to avoid flour retention near the dough pieces and to ensure durability (even after washing it in a washing machine).



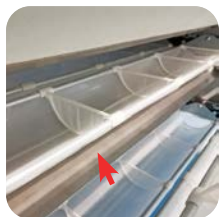
UV lamps for germicidal cycle

- Germicidal action with automatic timer to prevent bacteria growth and pocket darkening.



AMPLIA system for partial loading

- Allows partial loading or loading one out of two frames to reduce resting time and prevent sticking of hydrated and/or fermented doughs



Stabilized frame under the loader

- Prevents overturning when dough pieces fall into the pockets.



Casing in DIBOND® panels

- Covering made of two aluminum plates heat-bonded with a polyethylene plate.
- Lightweight (5.5 times lighter than stainless steel), easy to remove for cleaning and maintenance without risk of injury.
- Highly resistant to impacts, corrosion, weather, and UV.
- Extremely durable and stable, does not deform over time



Variable speed control on exit conveyor

- Adjusts the intermediate proofer to the working pace to avoid unexpected stops.



Mechanically welded stainless steel frame 50x50mm

- Very high rigidity of the chassis to avoid deformation, while being able to move it on its wheels for cleaning.
- Easy access for maintenance and cleaning without compromising the structure.

BMF AUTOMATIC INTERMEDIATE PROOFER OPTIONS



Central flour duster

- Stainless steel stirrer to avoid any accumulation of flour.
- Long motorized knurled roller for good flour distribution.



4 fans + 4 moisture extractors

- Dries the gutters during the automatic germicidal cleaning cycle.



Flour collection drawer

- Large stainless steel drawer on wheels positioned under the intermediate proofer.
- Enables quick and easy cleaning to maintain a clean environment.

MOULDING

POSITIONING

In certain configurations, it is possible to place the moulder inside the intermediate proofer, saving significant space in the bakery lab. However, if allowed by the layout, it's preferable to place the moulder outside the intermediate proofer (either to the right or to the left) rather than inside. This offers several advantages:

01 Ease of access: Simplifies cleaning and maintenance of both the intermediate proofer and the moulder.

02 Optional pocket flour duster: Reduces the risk of dough sticking.

03 Dual operator workflow: Makes it easier to handle with the production peak by allowing two operators to work together to collect the breads and to place them into the baking nets.



BMF Compact
intermediate proofer



BMF Leader
intermediate proofer

MOULDING

WHICH MOULDER TO CHOOSE?

Since the first moulder in 1954, MERAND has continuously evolved its range, now offering 7 different moulders to meet the different needs and expectations.

Shaping quality is a key word at MERAND. Our machines are designed to respect the dough optimally. With its expertise in the semi-industrial market, MERAND designs robust

machines by creating synergies between construction materials.

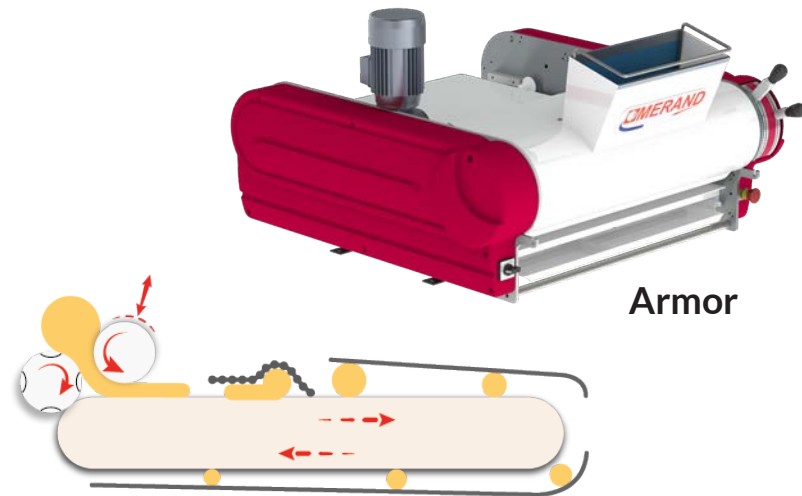
Among its most versatile moulders **TREGOR** and **ARMOR** are the best seller.



Tregor

STRETCHING BETWEEN TWO BELTS IN REVERSE MOTION

This process ensures a good stretching and is particularly suitable for baguettes. Additionally, the machine is very compact, making it an excellent solution for bakeries with limited space.



Armor

STRETCHING BETWEEN A MOTORIZED BELT AND A FIXED TABLE

This moulding is said to be «traditional» because it reproduces the movement of the baker's hand. He imitates the manual moulding of the baker on his work table to avoid any overheating of the dough.

POLYPAINS AUTOMATIC GROUP

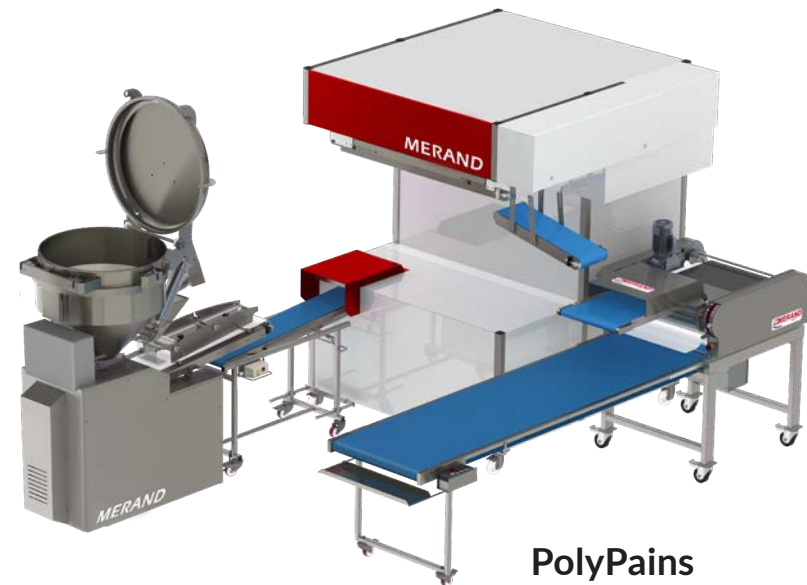
In the PolyPains automatic group, the volumetric divider is replaced by the DivBloc Dual.

- This machine automatically divides the dough pieces, reducing tedious manual operations that do not add any additional value to the product (e.g. taking dough from the mixer, dividing pieces, placing them on a scale one by one, then moving them by hand to a table or proofing pockets). The mecanization of this process will allow you to save a lot of time

- Simply use a tank elevator to automatically fall over the dough into a hopper, select the weight of the blocks (generally between 3 and 6kg of dough) and they automatically fall into the bins or onto plates.

- The productivity is impressive, taking only about 10-12 minutes to divide 180 kg of dough into 50 blocks of 3.5 kg each.

**DivBloc
dough block
divider**



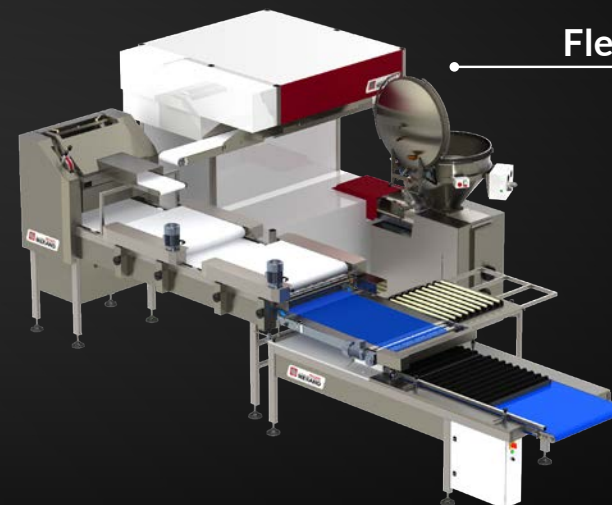
**PolyPains
automatic group**

MERAND RANGE OF AUTOMATIC BREAD LINES

EasyLine



FlexiLine



RheoPan



Scoring Line



Kraft Line



Gamme Artisan



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