

Rademaker Laminator

The magic of stress-free dough



Rademaker

*Specialists in food
processing equipment*

The sweet taste of laminated delicacies

Close your eyes and visualize a little bakery. Smell the delicious aroma of croissants and refined pastries. Wouldn't you like to produce such delicacies?

The secret of quality pastry and croissant products originates in the lamination process. The lamination process is also usable for the production of bread products and pizzas. The traditional lamination consists of sheeting the dough and adding a continuous fat layer which is folded into the dough sheet, after which the folded dough sheet is repeatedly laminated and sheeted to build up the required

number of dough and fat layers. Rademaker uses its experience in sheeting technology to develop innovative, stress-free dough sheeting and handling processes, capable of handling a broad range of dough, butter and fat types. Laminated dough can be produced according to the All-In and the French method. Market-driven research and development are the basis of the three different laminator methods Rademaker developed (lapping, retracting laminating and cutting & stacking). Which one best suits your application depends on the required capacity and the type of dough used.

Founded in 1977, Rademaker was one of the first companies to specialize in the development of innovative solutions for the bakery industry. Our Laminators reflect a wealth of know-how of dough, production technology and high quality final products. As a front runner in our field, we offer solutions that have your specific requirements as a starting point, and 24/7 after-sales and service support.

Rademaker laminators guarantee a perfectly laminated dough sheet. We offer modules for the following processes:

Sheeting



Dough pre sheeters generate consistent dough sheets



Reducing steps for a consistent, quality dough sheet (width and thickness)

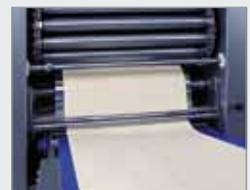
Laminating



Fat-pump turns blocks of butter, margarine or zero-trans fats into a consistent sheet



Folding the fat into the dough sheet



Reducing steps for a consistent, quality dough sheet (width and thickness)



Capacities range from 250 - 10.000 kg/hour, consistently produced hour after hour, day after day, and year after year.

Thanks to their flexible design, Rademaker solutions always combine a high product quality with an optimal capacity, quick product change-overs and superb hygienic characteristics. Rademaker laminating equipment always assures a high product output and the very best quality. In close cooperation with our valued customers, variables such as working widths and the number of dough layers needed are customized to meet your specific requirements.



Laminating the dough-sheet (up to 512 layers) depending on the line concept



Resting and cooling (option)



Reducing steps for a consistent, quality dough sheet (width and thickness)



Cross-rolling to achieve the optimal working width

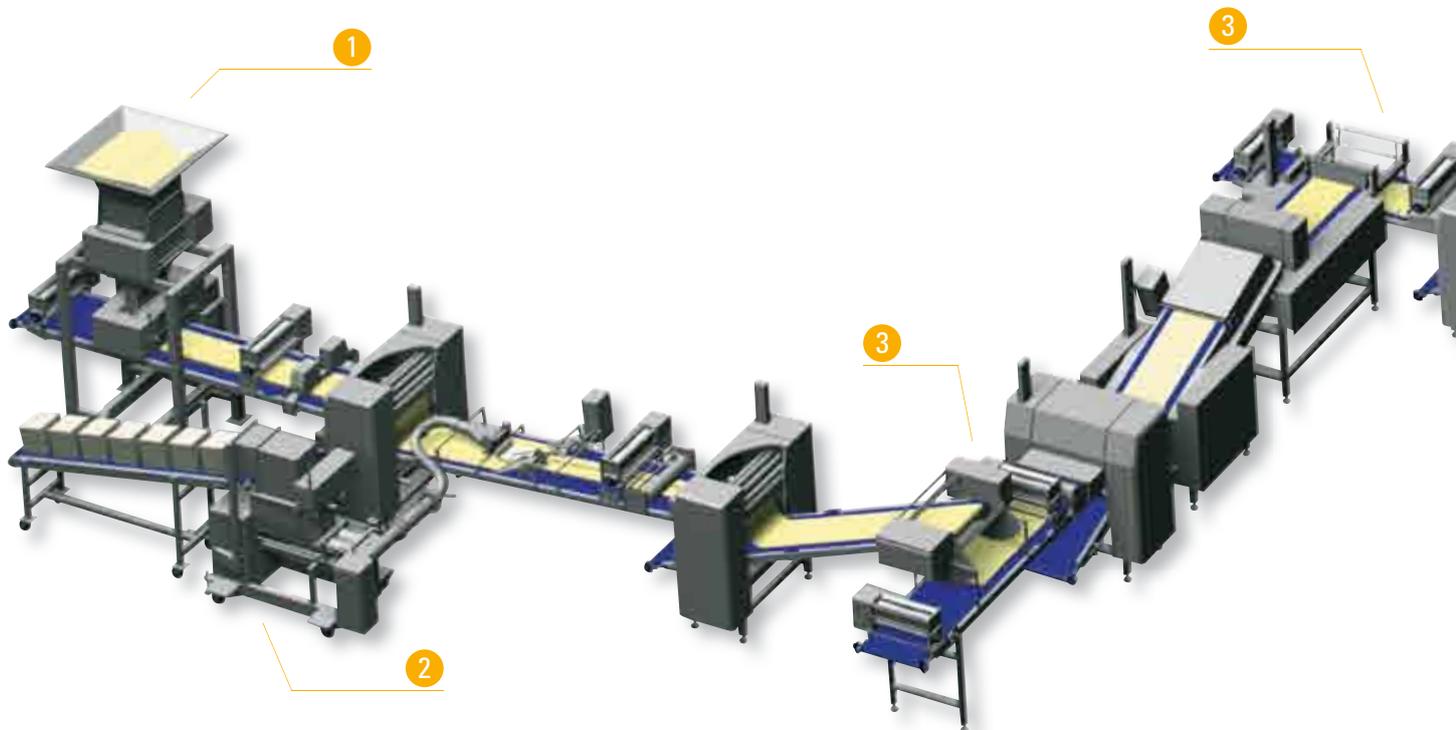


Reducing

The Rademaker Laminator is positioned in front of the Croissant line or Universal Make-up line. We also offer complete system integration solutions that include mixing, proofing, freezing and/or baking.

Tailor-made design is key

Rademaker Laminators are developed to produce a wide assortment of laminated dough for mid-sized to industrial bakeries. Each line is tailor-made using standard components. This flexibility allows for a wide variety of configurations, from a block processor to a fully automated laminator, with working widths varying from 600 - 1.600 mm, and resulting in the capacity you need. The Laminators meet international hygienic standards and consist of up to four laminating sections in different shapes (L-shape, U-shape, Z-shape etc.) A laminating belt can also be set up straight- in-line. Thanks to this superb flexibility, the line can be optimally configured to meet your specific application, resulting in the best possible production efficiency. When you choose Rademaker Laminators, you choose the very best solution for your situation, including the development of customer-specific modules, if so required.



The line configuration shown on this page is only an example of the many possibilities the Rademaker Laminators offer. Our specialists will be happy to apply their knowledge and experience in helping you determine the solution that best suits you and your products.

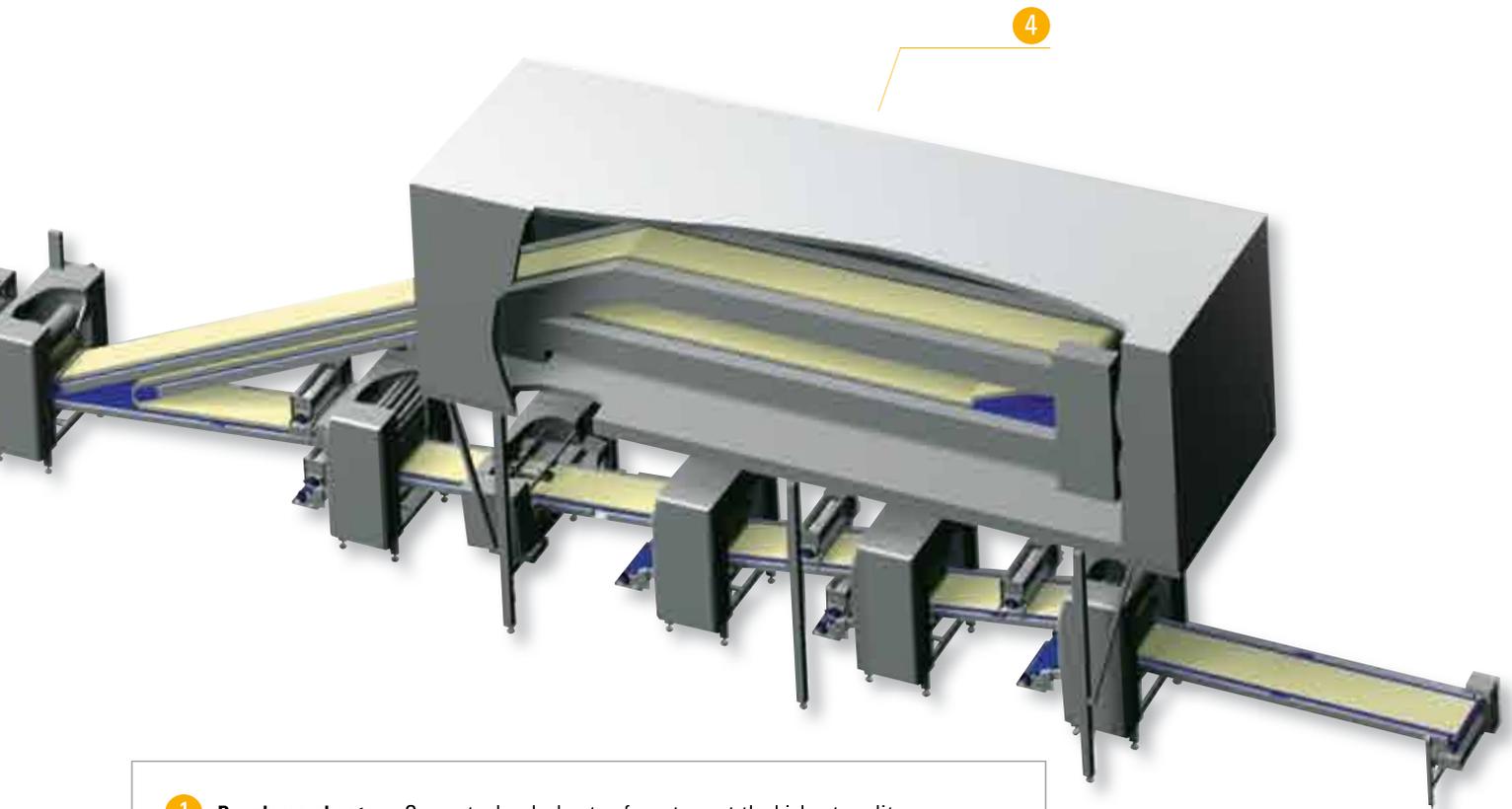


Line control

Rademaker Laminators are equipped with a PLC controller for a user-friendly line control, featuring automatic speed and height adjustment. The integrated control board comes standard with our Laminator. The optional mobile remote panel allows the operator to walk alongside the line and monitor the dough production process, making it a time-saving and user-friendly operational tool. The advanced control system enables the different sections to operate independently. While the last dough is still being processed towards the end of the line, the beginning of the line is ready for cleaning or for the production of another product.

Easy maintenance and little downtime

Rademaker Laminators are equipped with direct drive motors. Greasing nipples and other parts that require regular maintenance are located in easily accessible places outside the production zone. Cleaning and maintenance require less time and production can go on uninterrupted. All conveyor belts are equipped with quick belt release mechanisms to reduce downtime during cleaning and to keep maintenance to a minimum.



- 1 Dough pre sheeters:** Generate dough sheets of any type at the highest quality. Besides regular extruders we can also provide low-stress dough pre sheeters or even a Double-chunker Sheeting System (DSS).
- 2 Fat-pump:** The Rademaker fat-pump turns butter, margarine or fat blocks into a continuous fat sheet.
- 3 Laminating:** Rademaker developed three different laminating methods that can laminate the dough sheet up to 512 layers, depending on the line concept, dough type and capacities.
- 4 Cooling and/or resting:** A cooling and/or resting cabinet can be placed inline at several laminating sections to achieve the highest laminated dough quality.

The Baker's secret

When fat is folded into the dough and layers are created, you get the light and crispy taste that croissants are famous for and that earns pastries their reputation. The development of Laminators is a core activity of Rademaker. The experience and expertise gained throughout the years is what makes us the global market leader in laminating processes. Our know-how is put to use when we develop the production equipment that meet and exceed our customers' requirements worldwide. Whether it is a bended croissant, a swirl, maple pecan or any other pastry you want to produce, we will apply our dough and laminating know-how to benefit you.

Layering

Your product requirements and the desired manufacturing process determine which type of fat should be used: butter, margarine, shortening, low-trans or non-trans margarine. To achieve the highest quality dough layers, it may be necessary to cool and/or rest the dough sheets in a cooling and/or resting cabinet. Within the laminating process, the layers of dough and fat are essential for the baking structure of the final product. In a co-development relationship with you, we translate your requirements into a tailor-made laminating solution and thus offer a range of Croissant and Make-up lines to shape the dough in any product desired. The laminating technology (without fat folding) can also be applied in the Rademaker Bread lines, Pizza Base lines and Flatbread lines.





Three laminating methods

Depending on your type of dough and capacities, Rademaker developed three different laminating methods.

Lapping



The dough sheet runs vertically between a guiding system that moves back and forth. This symmetric lamination method is unsuitable for soft dough and has a maximum lamination width of 600 mm.

Retracting laminating



The belt with the dough sheet moves back and forth above the next conveying belt, this is an asymmetric lamination system. Suitable for soft dough and no restrictions regarding laminating width.

Cutting & stacking



A guillotine cuts the dough sheet into regular rectangular sheets which are then stacked on top of each other. This flexible symmetric system lays even and uneven layers. Suitable for soft doughs and no restrictions regarding laminating width.

The above laminating methods can also be applied in-line. In-line lamination knows no restrictions regarding laminating widths and is suitable for high capacities.

Rademaker

Continuous improvement and innovation

When you choose Rademaker as your partner in Laminators, you choose the very best. We listen to customers, keep close track of market developments and treasure the feedback of our service engineers. This enables our Research & Development department to develop innovations you can face the future with. Our robust and durable production lines are built from first-class materials by qualified professionals. Special components are sourced from selected third party

suppliers with a proven track record. Rademaker equipment meets international food processing standards and is designed for wet cleaning. Hygiene and safety are top priorities. The quality that results from all of this and of which we are so proud, is reflected in every single component of every production line we make and in every service we provide. A continuous improvement program ensures that this high quality is maintained at all times.





Rademaker fat-pump

Especially for the laminating process, Rademaker developed a fat-pump capable of processing virtually all types of fat under the right circumstances. The pump produces a continuous fat sheet. The pump's infeed is unique and consists of horizontal screws and vertical screws with a moulding function which ensure the continuous flow of fat into the pump. Thanks to a pressure sensor a constant pressure can be realized. The touch-screen PLC control offers uncompromising operation. The pump is mobile and can be fully dismantled for fast and easy cleaning. The accuracy of the Rademaker fat-pump makes the pump well respected.



Rademaker Technology Centre

We do more than producing Laminators alone. The development process of your production line starts in our Rademaker Technology Centre (RTC). Our Technology Centre features several pilot lines for any bakery product, whether bread, puff pastries, croissants, pizzas and flatbread or specials such as gluten-free or reduced salt products. If you want to further improve your existing products or develop an entirely new product, the specialists of the RTC are at your service. In an optimal testing environment with temperature conditioned rooms for dough make-up, ovens, proofers, mixers and anything else you might need, we test products and processes.

Whatever recipe your product desires, dough processing holds no secrets to us. After having translated your wishes and requirements into a fully operating production line, it is important to transfer knowledge to your staff for a good performance. The RTC employees will enjoy starting up your production and train your staff to operate the line. We gladly share our technical and technological know-how and experience. The Rademaker Technology Centre is our recipe for the production lines or turn-key solutions designed for you: a unique combination of proven and new technology plus attention for detail, all based on your own requirements.

Rademaker

Customer satisfaction is key

Rademaker's technology-driven research has resulted in Laminators that are unmatched. To sum up some of the benefits the Laminators offer:

- **Flexibility & line efficiency**
Tailor-made solutions using standard components. Quick and easy change-overs. Random speed changes are automatically re-calculated and changed to ensure a consistent dough flow through the line. Low downtime, high efficiency.
- **Customer requirements are met**
Customized solutions meet your specific demands. The Rademaker team will help you to meet your needs by offering technological and technical support. Test facilities are available and custom-built solutions will be developed when necessary.
- **Dough-friendly processing & high dough quality**
Stress-free dough sheets from the very beginning to the end of the process. This leads to a consistent output for any dough type. Sensors that constantly control and scan the production process, leading to a consistent product quality.
- **Cost reduction & low maintenance**
Great savings in terms of weight accuracy and return on investments (ROI). Considerable cost reduction thanks to easy and fast maintenance and cleaning.
- **Safety & hygiene**
Rademaker production lines are designed using all relevant norms and regulations for safety. The Rademaker Laminator is suitable for wet cleaning and built according to CE-regulations. It meets IFS, BRC, and GFSI standards. Our goal is to meet and exceed the latest hygiene and safety standards and provide also on these topics full customer satisfaction.



Optimal service

24 hours a day, 365 days a year. Our service doesn't stop after the delivery and installation of your Laminator. The line is designed to be up and running non-stop. To ensure this, and to further increase the line's life cycle, we offer a cost effective (preventive) maintenance program.



Turn-key solutions

While the Rademaker Laminator is a perfect stand-alone solution, it mostly feeds other lines (for example, the Rademaker Croissant line and/or the Rademaker Universal Make-up line). We do, however, also provide turn-key solutions. The emphasis on solid and long-standing partnerships with third-party suppliers exploits our expertise to the fullest. This enables us to integrate our production lines with equipment of expert third-party suppliers to provide overall solutions that work for you.

Rademaker

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