

#### We have a Worldwide presence. Feel free to contact us!



## Traditions transferred into efficient production

Flatbreads go centuries back in time and are getting more and more popular worldwide because of the healthy image and the large variety of consumption. The need for high capacity Flatbread production lines has therefore increased. We have transformed the traditions of the past into a state-of-the-art production line. The development of Flatbread Sheeting lines is one of the core expertise's of Rademaker. The lines generate a consistent and stress-free dough sheet by means of the Rademaker sheeting technology.

The production line is designed to meet your specifications and capable of handling a broad range of dough types, different shapes and sizes so that every unique product can be made. The flexibility offered by the high-volume Flatbread lines enables production of any style of authentic and unique bread, exactly to your requirements. Rademaker Flatbread Sheeting lines can process all kinds of dough's, from green to strongly hydrated. Dough thickness can range from les than one millimetre to a few centimetres thick. Therefore, a wide variety of products and the market leading quality our customers can expect. The working width ranging from 600mm – 1,600mm, with a production capacity of up to 12,000kg of dough per hour.

## Added values:

- High flexibility resulting in a wide product range
- Exceptionally thin dough thickness and accuracy
- Perfect product shape due to lowest dough tension
- Consistent dough quality
- Efficient production due to fast maintenance, cleaning and change-overs
- Hygienic design upgrade

All these aspects result in a proven lowest cost of ownership.

# Sheeting technology

Rademaker is a specialist in sheeting technology. Sheeting technology is preferred above the traditional system because sheeting provides important benefits. Sheeting makes it possible to handle a wide variety of dough types, from 'green' to pre-fermented dough, all at high capacities. There is great flexibility in product shapes that can be made. By using stress-free dough sheeters and laminating technology, you can achieve basically any dough and bread structure desired. The Flatbread line concept enables the combination of flatbread types with artisan bread types, all produced on one sheeting system.

## Advantages of the sheeting technology

- Sheeting technology can handle much higher water content
- No damage of gluten and cell structure
- For every type of pizza of flatbread we have a special designed pre-sheeter
- Flexibility of products, for instance adding raisins or other inclusions
- Much better product guality, judged on ten benchmark criteria
- · Higher level of hygiene and use of food-grade materials in contact with the dough
- Less cleaning time
- Lower running cost, better return on investment



# Producing the variety of your choice

People have been making flatbreads for over 6,000 years. Traditionally they were made by hand by artisan bakers. Flatbreads have conquered the world the last couple of years and we think that it is mainly because of their healthy image. That is why they fit into a modern and healthy diet. Because of advanced processing and packaging technologies, we can produce flatbreads on an industrial scale. Thanks to the versatile and flexible set-up any style of flatbread can be produced. With the thickness ranging from 20 mm to, for example, 0,6 mm for Lavash. Flatbreads such as pita, lavash, barbari, sangak, taftoun, naan, tortilla, roti, chapati, focaccia, bagel, thin sandwich, tunnbröd, wraps and pizza bases; can be sheeted or pressed in any shape or size. Even gluten-free flatbreads can be produced on the Rademaker Flatbread Sheeting line.





## Variation and versatility

The Rademaker Flatbread line consists of a number of modules, designed to flexibly meet your requirements. Flatbreads in any shape or form can be generated and 100% of trim dough can be reused. Mono-production or multi-production, mid-range or industrial volumes, it is up to you. In a partnership relation with you, Rademaker can configure the Flatbread line that best meets your needs, based on all demands and requirements.

The Flatbread line has a working width that varies from 600 to 1,600 mm, with capacities that depend on the product and the thickness of the dough. The line is designed in such a way that all parts are easily accessible for cleaning purposes. This way only a minimum of maintenance is required.

#### In-line dough resting

In-line dough resting enables the dough to develop its cell structure volume and to develop the taste of the final product. A Proofing system can be placed in-line (to proof continuous dough sheets prior to the product stamping and/or cutting) and it can also proof individual dough products after cutting out the products. The line's flexibility allows the customer to decide, depending on the product. Both variants can be offered by using the bypass stations. Together we can determine what solution best suits you and your products.



The line configuration shown on this page is an example of the many possibilities that our line offers. In addition to industrial production lines, we also provide a solution for semiindustrial production. Our specialists will be happy helping you determine to the solution that best suits you and your products.

#### Example of a Flatbread production process:



1. Dough pre sheeters: generate stress-free dough sheets of any type with excellent weight control at the highest quality. The dough structure is untouched because of the dough friendly handling.



2. Quick Reductor: the first reduction of the dough sheet's thickness is done by a Quick Reductor. Due to our unique non sticking rollers, we are able to process dough types with high water percentage.



3. Laminating technology: to obtain Technological improvment of your final product.



4. Cross roller: to compensate the one-sided reduction of the reduction stations and to adjust the dough sheet in thickness. The dough sheet will reduce in thickness and increase in width.



5. Reduction station: the thickness of the dough sheet is reduced while passing through the rollers



6. Product cuting and docking: products are cut out of the dough sheet. Docking ensures that the products develop their typical surface and makes sure that there is no bubbling on the product surface during baking.



sheet or products can be

in-line proofed, depending

on the type of products

and production process.

the rework dough is transported back to the pre-sheeter or mixer. This brings our Flatbread line to a highly effective and cost saving level.

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station:



9. Topping station: а module for seeding the baked products, e.g. with sesame or other seeds, can also be integrated into the plant



10. Transportation toward oven and/or freezer.

## **Efficiency & Functionality**

#### **Our Commitment to Functionality**

To enhance functionality, our system incorporates rounded edges and fully opening covers on both sides of each unit. By optimizing the space between working stations, we ensure the best possible accessibility and visibility of the process.

Attached tools are mounted with standoffs, providing a minimal distance of 1 inch to facilitate efficient cleaning activities. We prioritize overall safety by implementing safety locks, while lightweight safety covers with additional handles enable ergonomic operation.



Elimination of falling heights: by minimizing the transportation height throughout the production line, it results in a stable and relaxed dough sheet.



An open design with high visibility on the process results in fast product set-up and procedure optimization.

#### Versatility in flatbread cutting

The Rademaker flatbread line can produce a wide range of flatbread shapes including round, square, rectangular and special shapes such as naan and foccacia. This can be achieved by using different make-up tools such as the rotary cutter or special shape cutters for use in the guillotine. To switch between products, these tools have a short changeover time thanks to our Tool Assistant innovation, keeping production efficiency at a high level.



Example: Round shape



Example: Special shape

For the production of bagels, we have developed a system that easily removes the centre piece from the dough. The dough pieces are collected and can be returned to the mixer and/or pre-sheeter.



#### Dough recycling system

Rework dough is created when the dough sheet is cut to its final width. This rework dough is directly transferred back into the pre-sheeter by our dough recycling system. Through extensive testing and analysis, we have perfected this system.

The key to achieving exceptional dough quality lies in the precise placement of the rework dough beneath the new dough batch. The dough recycling system elevates the Rademaker Bread line to a highly effective and cost-saving level. By seamlessly integrating the recycling system, we maximize resource utilization and minimize waste, resulting in significant operational efficiencies.



#### Hygienic Design

Our Bread line is designed according to the highest Rademaker Sigma hygienic design standards. These guidelines are directly derived from various high-end requirements for

hygiene & cleanability such as the GMA standard and EHEDG recommendations. For more information about our hygienic design, you can download our hygienic design brochure.





Accumulation of dirt and dust is reduced due to the application of stand-offs.

#### Sanitary operation

Sanitary operation is achieved by using lifetime- or nonlubricated bearings throughout the direct product zone. Directdrive motors are positioned outside the product zone as much as possible. All motors contain food approved H1 lubricants, which results in zero risk for lubrication contamination.

Outside the direct product zone, sealed bearings are applied and can be lubricated during or after the production run. To keep the rollers of the reduction stations as clean as possible they are fitted with wear resistant roller scrapers which are selected after extensive testing.

To achieve an easy to clean surface the machine is executed with round edges, tubes, ducts, angled surfaces and a smooth surface finishing (Ra <0.8) in the production zone.



Angled and smooth surface finishing



Wear resistant roller scrapers to keep the rollers of the reduction stations as clean as possible

## Customer satisfaction is key

Based on over 40 years of Rademaker expertise, our production lines are considered as a sublimation of technological excellence gathered over time resulting with high product quality at the lowest possible cost of ownership!

### Unmatched 24/7 Service

Rademaker supports your production process every way we can, 24 hours a day, 365 days a year. Our service doesn't stop after the delivery and installation of your equipment. We can provide a full range of services to cover all system and process related issues through the operational lifetime of the machinery.

- V 24/7 Service Helpdesk
- **Customer Training**

- **Spare parts**
- $\checkmark$ 
  - Upgrades, refurbishing & optimising

#### Technological support by our Technology Centre

The development process begins at the Rademaker Technology Centre (RTC) where product concepts are transformed into a Rademaker production line. It is equipped with multiple pilot lines capable of handling a wide range of bakery products, including bread, puff pastries, croissants, pizzas, flatbreads, donuts, gluten-free options, and specialty items. The RTC in a nutshell:

- Testing, Product development & Demonstrations
- Worldwide experience and knowledge available for you
- Dedicated Technologists available to assist you
- Climate controlled testing rooms

#### Continuous improvement and innovation

Preventive and corrective

maintenance

Our continuous pursuit of equipment perfection propels us to consistently elevate equipment performance. Aligned with the latest hygiene and design standards, the Rademaker Bread machine embodies state-of-the-art excellence. In Culemborg, our dedicated Bread Product Team is entrusted with the mission of maintaining the excellence of our Bread production line. At the RTC they have access to a dedicated Bread production line for testing and innovation. This empowers us to enhance performance, elevate product guality, and stay aligned with the latest technological standards in the market, ensuring our customers receive nothing but the best. Our continuous improvement program, coupled with attentive client feedback, fuels a drive to enhance machine performance during operation, simplifying product change-overs, cleaning, sanitation, and maintenance.



#### Advanced and user-friendly control system



Great care is given to the user interface of the 22-inch touch screen. Its position can be effortlessly tailored to the preferred working height. The control platform facilitates seamless OMAC-based data exchange with neighboring third-party equipment. Advanced data processing empowers real-time monitoring and the fine-tuning of equipment efficiency.

Swift start-up and minimized flour consumption are achieved through a fusion of process and recipe

information. The existing cascade system, along with automatic belt speed adjustment (DDIC/Dough loop), is integrated in the overall machine design. The advanced control system features fully automated speed adjustments, allowing the different sections to operate independently. While the last dough part of the production run is processed towards the end of the line, the beginning of the line is ready for cleaning or for a next production run. For utmost convenience, an optional iPad control is available, enabling remote operation from any point along the production line.



#### **Discover the Rademaker Academy**

Efficient production and profitability dependents on qualified and trained operators. We understand the importance of this. For this reason, Rademaker started the Rademaker Academy – a comprehensive resource of ongoing training to support our customer's Rademaker process for a lifetime. The training is conducted by gualified training personnel - each with a customizable program tailor-made to your expectations, needs, and Rademaker system.



#### System integration

Our Systems Integration Division is the result of our client's desire to have Rademaker take control and responsibility for a part or the complete bakery system. The benefit being our clients can leverage Rademaker's decades of international bakery experience while focusing on their day to day operations and core business. Our approach to system integration is bringing together the best for every single section of a production facility. The customer is provided with a turnkey solution that integrates the Rademaker production line with a broad range of auxiliary products and systems, including silos, mixing, handling equipment, product carriers from dough preparation to other process stages, proofers, ovens and freezers.

#### Rademaker



#### Inhouse production

Our equipment undergoes a comprehensive production process within two cutting-edge facilities. Our commitment to quality is evident through the expertise of our highly skilled craftsmen and our dedication to using premium materials in every aspect of our production lines.



